



# THE Portable Paper

## BURN YOUR OWN 128K EPROMS

## New, Free, .EXE File Compression Utilities

## As-Easy-As: Spreadsheet Alternative For The Portable Plus

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# Personalized Software Products and Services in Brief:

SYMBOLS: **110** = HP110 **P+** = Portable Plus **PV** = Portable Vectra

## WORD PROCESSING

**110** **P+** **PV** **LS** **150**

### The Editor II

Many features not in MemoMaker, including search/replace, editing 2 files at once, embedded printer codes, up to 255 columns per line and block centering and macros. Does word wrap, right justify. Easy to use. Uses less than 40 K. Versions for HP110, Plus, HP150 Vectra and IBM PC all on master disk.

**110** **P+** **PV** **LS** **150**

### VI

UNIX-style editor.

**P+** **PV** **LS** **150**

### Word Perfect 5.0 (and 4.2)

World's best-selling word processor, customized to P.Plus. Dozens of advanced features, including fonts, integrated text and graphics, style sheets, document compare, text in columns, footnotes, tables of contents, indexes, 115,000 word speller, thesaurus, mail-merging, built-in math functions. P.Plus version comes with PlusPerfect, our own IBM PC emulator that allows WordPerfect to run on the Plus. Optional ROM Backup saves 384K of RAM.

## WORD PROCESSING UTILITIES

**110** **P+** **PV** **LS** **150**

### The Formatter

Sophisticated text formatter for large reports, program documentation, etc. Multiline headers, footers, page numbers, table of contents, glossary capabilities, more. Works on MemoMaker, The Editor files. (Manual in draft form: no technical support available.)

**P+** **150**

### Format Plus

An integrated word processing command center for the Portable Plus. Let's you run your word processor, spelling checker, and other applications from a single easy-to-use program. Also lets you do headers, footers, lines per page, automatic page numbering and more.

**110** **P+** **150**

### HPrint

Prints text (MemoMaker, ASCII) files and prints them on an HP Printer. Comes with italic type font for ThinkJet. Also allows bold, underline, compressed, expanded, subscripts, superscripts, headers, footers, page numbering, double space, mail merging, and it lets you create your own graphic characters.

**110** **P+** **150**

### PrinterTalk and Format110:

#### MemoMaker Enhancers

**PrinterTalk** lets you change type styles in middle of document, number of copies, and lines per page; do automatic page numbering, more. **Format110** lets you format headers, footers, and page numbers; chain or merge documents; compensate for "widow" and "orphan" lines and much more.

**110** **P+** **PV** **LS** **150**

### RightWriter

Flags errors in grammar, style, usage and punctuation, inserting comments directly into your document. Also, produces overall critique. Works with most word processors. Also available: **RightWords** dictionary extension utility: it has 7 auxiliary dictionaries (business, computers, engineering, etc.), and also lets you add words of your own to RightWriter's built in dictionary.

**P+** **PV** **LS** **150**

### Webster's Spelling Checker

Rated Editor's choice by PC magazine, Webster's packs a 110,000 word dictionary into 207K of disk memory. Webster's shows you incorrect spellings in context and suggests corrections, lets you preview questionable words before you edit. Exceptionally easy to use. Customized for the Plus and HP110.

**110**

### The Word Plus

Excellent spelling checker with a choice of two dictionaries- 45,000 words and 35,000 words - plus ability to input additional words of your own. Also does word counts. Great for HP110.

## UTILITIES TO BOOST YOUR PRODUCTIVITY

**P+**

### BacTools Disk

Contains a wide range of utilities to help you back up files from a 1 Megabyte or larger Edisk onto floppy disks. Lets you back up selected files, automate the entire backup process, and more.

**110** **P+** **PV** **LS** **150**

### DOS Tools

Well over 50 excellent public domain programs that enhance DOS, all tested on the Portables. Documentation has been rewritten for clarity for ease of use, and includes examples, index, and table of contents.

**P+** **PV** **LS** **150**

### FilePlus: File Management

Lists the files in two directories simultaneously. You can tag multiple files and perform actions (such as copy, delete, move, etc.) on all the tagged files at once, without having to use P.A.M. or DOS.

**P+**

### Games (Chess + 9)

Chess, Go-Moku, Othello, FastMind, Yahtzee, Tic-Tac-Toe, Fox & Hounds, Concentration, Landmine, HP-Amateur customized for Plus. ROMs includes TigerFox, 1st 4 listed above.

**110** **P+** **PV** **LS**

### Link HP-IL

A software program that lets you transfer data from any HP-IL device to any other HP-IL device. Now you can access your main computer (HP Portable, HP150, or IBM PC) its unlimited storage capability, and all its peripherals from your HP41, 71, 75 or series 80!

**110** **P+** **PV** **LS** **150**

### The Norton Utilities

Allow you to recover deleted Portable files and organize your electronic and external disks. Peter Norton has authorized us to include an extra 3 1/2" disk (formerly only available on 5 1/4" disk). The disk includes The Norton Utilities, and instructions for running them on the Portables and the HP150. Version 4.0 and the advanced edition are now available.

**110** **P+** **PV** **LS** **150**

### 1987-90 Subscribers Disks

Available only with Portable Paper subscription

**1987** includes: (1) DISKPACK, a disk-packing utility, commercial equivalent sells for \$ 50 (2) Time Manager calendar utility. (3) HP Calculator program. (4) Game, Lotus templates **1988** includes (1) Time Manger mail-merge utility. (2) Great public domain software for Vectra. (3) password protect program (4) Xmodem program for P.Plus. (5) Lotus templates. (6) Games. (7) DOS Tools. (8) HP to Alternate mode toggler, (9) Lots more. **1989** includes: (1) File manager utility that lets you tag files for mass copying and deleting. (2) File compressor (3) New RAM-based Time Manager with Week-at-a-glance screen. (4) Compuserve Automation program. (5) A menu program easier to use than PAM (6) Fast file finder (7) Directory lister (8) More. **1990** includes: (1) Best file compression / archiver, (2) Wordstar work-alike editor, (3) LS/12 DOS extender, (3) Quick unerase util, (4) Space saving & DOS utils, (5) Great Russian game, (6) Text search util (7) Much more

**P+** **PV** **LS**

### PrintMaster

Allows you to use your HP Portable and ThinkJet to produce logos, invitations, banners, and other graphics. Customized for Port. Plus.

**110** **P+** **PV** **LS** **150**

### Private File

Protects letters, documents, data files by scrambling your file. Your password unscrambles.

**P+**

### Shelp

From within almost any program, Shelp gives you immediate access to a notepad and calculator and lets you define up to 26 keyboard macros- that is, assign up to 31 character to a single keystroke. Written for Portable Plus.

**P+** **PV** **LS**

### Squish Plus

Automatic file compression program that as much as much as doubles available disk space. If you know how to save and retrieve files from your application, you know how to use Squish Plus. Available on ROM.

**110** **P+** **PV** **LS**

### Tiger Fox

A great video game of changing mazes and double pursuit designed for the Portables.

**110**

### Time Manager

The highly acclaimed Portable Plus ROM-based **Time Manager** program in a 3 1/2" disk version for the HP110 Portable. Does not run on Portable Plus. (Available to Portable Paper Subscribers only.)

**110** **P+** **150**

### Typing Whiz

Better than almost any typing tutor program on the market- designed specifically for The Portables and the HP150, Immediate numeric and graphic feedback or your progress.

## FILE TRANSFER MADE EASY

**PV** **LS**

### LapLink

A software program for high speed transfer of files between your Vectra CS or LS/12 and IBM PC or compatible. Versatile (works with parallel and serial ports), easy to use (simple manual or automatic file tagging).

**110** **P+** **PV** **LS** **150**

### Disk Conversion Service

We will convert your data to and from single sided, double sided, high density 3 1/2" and 5 1/4 inch formats at a reasonable cost.

**P+** **PV** **LS**

### HPDuette

A software program that lets you transfer files back and forth at high speed between your Portable Plus and an IBM PC or compatible desktop computer- without the need for HP-IL card. Comes with proper serial cable.

**110** **P+** **PV** **LS** **150**

### ReadHP

This software program allows an IBM compatible computer with a 3 1/2" disk drive to read and write to HP formatted disks.

## COMMUNICATIONS

**110** **P+** **PV** **LS** **150**

### CompuServe Starter Kit

Starts you on Electronic Information Service, CompuServe (which includes the HP Forum). Includes \$25 worth of free time and CompuServe's monthly magazine, Online Today.

**P+**

### Relay Gold 2.0

Only P.Plus RAM-based communications package that handles both file transfer and terminal emulation. This popular IBM PC program, modified for the P.Plus, is easier, more powerful than Reflection. Lets you access electronic bulletin boards, allows for unattended file transfer, supports distributed processing, more. Beginners find it easy to learn, yet can handle the most sophisticated data transfer tasks.

**110** **P+**

### Term110, TermPlus

Exceptionally easy-to-use alternatives to HP110 Terminal and P.Plus PC2622/Reflection. Both Term110 and TermPlus allow you to send and capture ASCII information. Both offer fast XMODEM transfer of programs, Lotus worksheets, and archive files. Both offer auto-logout, dialing directories, on-line help, ability to run other programs while phone still connected.

**110** **P+** **PV** **LS** **150**

### WorldPort Portable Modems

The **WorldPort 2400**, **WorldPort 2400 / MNP** and the **WorldPort 1200** are battery powered, highly compact (4"x2"x1"), lightweight (6.5 oz), full featured external modems that transmits data at 300, 1200, and 2400 baud. Fully compatible with industry standard Hayes AT Command Set, and with both CCIIY and Bell standards.

## SPREADSHEET ENHANCERS

110 P+ PV LS 150

### 101 Macros for Lotus 1-2-3

Useful in themselves and as learning tools for novice and experts alike. Includes: recalculating ranges, double spacing spreadsheet prior to printout, hiding notes next to data cells, addressing form letters, and printing labels automatically. customized Lotus 1A and 2.01.

110 P+ PV LS 150

### SideWinder

This program allows you to print your spreadsheets (or other text file) sideways on your ThinkJet. This means you can print your 60 column by 53 row spreadsheet Portable as one long printout without cutting or pasting.

P+

### Lotus 123 in RAM Driver

Utility allows you to run Lotus 1-2-3 or Symphony from RAM or disk rather than ROM.

## PROJECT MNGMENT

110 P+ PV LS 150

**2 Project Management Packages**  
**Milestone** is for small to medium projects - bit awkward on HP110). **Pertmaster** larger projects - specify which machine.

## DATABASE, STATISTICS & ACCOUNTING

110 P+ PV LS 150

### Condor 3 and Condor Jr.

Easy-to-use database programs customized for the HP Portables. Enter data, sort, search, manage files, and print address labels with ease. Condor, Jr. for the HP110 allows limited report writing, and is highly memory-efficient. **Condor 3** for Plus, Vectras, and HP150 is a fully "relational" system, allowing you to combine data from two or more files. It includes advanced report generating capabilities, data transfer with Lotus 1-2-3, and more.

P+ 150

### Dac-Easy Accounting V 1.0

Popular, powerful, yet inexpensive accounting package. General Ledger, Accounts Receivable, Accounts Payable, Purchase Orders, Billing, Inventory, Forecasting modules are all fully integrated. Easy-to-use menu-driven system. Generates numerous journals, aging reports, balance sheets, and more. Supplies limited.

P+ PV LS 150

### Statistik

Easy to learn and use comprehensive statistical package. Data can be entered from the keyboard or imported from spreadsheet or database files. Includes multiple regression, most standard parametric and non-parametric tests, p-values, plots, histograms, and much more.

## PROGRAMMING

110 P+ PV LS 150

### Turbo Pascal 5.5

IBM PC version of compiler (with OOP) adapted for Plus, HP150. Includes our TurbPlus integrator that lets you easily go between your text editor and the Turbo Pascal compiler.

110 P+

### Turbo Optimizer For v3.0

Saves run time and storage space by making your Turbo Pascal 3.0 programs 10-30% faster and 15-50% smaller. For Version 3.0 only.

## GRAPHICS

P+ PV LS

### Flowcharting II+

Creates profession-looking flowcharts and organizational charts using 26 flowchart symbols in 95 sizes. Wide variety of text fonts for creating labels. Easy to add and delete lines without disturbing the rest of the flowchart. Shrink Screen feature lets you view up to 14"x11" chart on 25 line screen.

P+ PV LS

### Logitech Mouse for Port. Plus

3 button mouse bundled with our propriety Portable Plus Mouse Software and cable. Using the mouse to move the screen cursor makes using your Plus easier and more fun. Logitech was rated Editor's choice by PC Magazine.

110 P+

### Sketch

Lets you draw free-form using cursor keys. Also draw lines, boxes, circles by pressing a single key. Entire screen can be printed on ThinkJet at virtually any enlargement.

## ACCESSORIES

110 P+ LS

### Targus & Fieldpro Cases

Roomy, rugged, high quality, highly padded cases to protect HP Portable, portable printer or disk drive when traveling.

P+

### External Numeric Keypad

Allows fast numeric entry from Lotus & other applications. Attaches to Plus via serial port.

110 P+

### HP9114 Empowerer

A hardware product that prevents the HP9114 disk drive from running out of juice in the middle of your work. Plug Empowerer into your HP9114 and into a normal wall outlet, and you can run your HP9114 forever.

110 P+

### Mobile Recharger

Lets you recharge your HP110, Portable Plus, ThinkJet, HP9114, HP hand-held etc. from your cars cigarette lighter.

110 P+

### Power Cube

Powers and recharges up to three HP devices (HP110, Portable Plus, ThinkJet, HP9114, HP hand-held, etc. from a single wall outlet.

110 P+ PV LS

### 3 Ring Binders for Back Issues

Handsome printed 3-Ring binders for back issues of The Portable Paper. Specify Volume number (1-5) or all.

## VECTRA CS AND LS/12 PRODUCTS

PV LS

### LapLink

Transfers files to PC. See "File Transfer Made Easy" at top of previous page.

LS

### 1 Meg, 4 Meg EMS Memory

Expansion memory for your LS/12.

110 P+ PV

### HP-IL Card for Portable Vectra

Fits in adapter slot. Functions like IBM PC HP-IL card, allowing transfer of data to HP-IL devices like the HP9114, HP110, Portable Plus.

PV LS

### EtherNet Adapter

Pocket EtherNet Adapter connects to parallel printer port of the LS/12, Vectra CS, or compatible; allows connection to an Ethernet or IEEE 802.3 LAN. Adapter supports Novell NetWare versions 2.0a and higher, is the size of audio cassette tape holder, weighs 5 oz.

LS

### Expansion Chassis

LS/12 AC Expansion Chassis (from Zenith) supports up to 3 XT compatible cards (for EGA or VGA graphics, addition I/O ports, EMS memory, networking, etc.). Requires qualified technician to install 68-pin connector in LS/12.

110 P+ PV LS 150

### Kodak Diconix 150 Plus Printer

Battery powered inkjet printer; hardback dictionary sized. Draft and Quality modes. Panel or software controlled fonts include: pica, elite, condensed, super/subscript, underline, italic, emphasized, proportional, enlarged / condensed, double strike, double-wide.

LS

### LapTape Tape Backup Unit

Tallgrass Technologies tape backup unit for backing up LS/12 20 or 40 Meg hard disk. Connects via floppy disk connector. Vol 4:4:24

PV LS

### NoSquint

Turns hard-to-read underline cursor into easy-to-read block cursor. Vol 4:4:24.

LS

### Numeric Keypad

Zenith numeric keypad for adding machine-style numeric entry plugs into LS/12 right side

110 P+ PV LS 150

### StatPower Pocket Power Invertor

Plug your LS/12 or Portable Vectra CS recharger into this 1 lb, 4.5" x 3.5" x 1.3" unit. Plug the StatPower unit into your car's cigarette lighter and recharge your battery. Vol 4:3:14.

PV

### Traveldisk Portable Hard Drives

External, 10 to 250 MB, rugged, portable hard drives. Uses bus extender card designed for P.Vectra CS. Can use same drive with PC.

PV LS

### Valitek Tape Backup Unit

60 or 160 MB tape backup unit that connects to any PC via the serial or parallel port.

LS

### Weltech 5 1/4 Inch Disk Drive

5 1/4" disk drive that plugs right into the LS/12 external drive port. Vol 4:4:19.

PV LS

### Weltech PhD Serial Hard Drive

20 MB battery charged hard drive that connects to serial port. Vol 4:5.

PV LS

### WorldPort 2496 Fax & Modem

Battery powered, portable fax and 2400 baud modem connects to serial port. CCITT. Vol 4:5.

## UPGRADES/REPAIRS

110 P+ 150

### Repairs

We'll fix your HP110, Portable Plus, ThinkJet, HP9114, HP150 at reasonable prices.

P+

### FastPlus

By installing faster processor and increasing the clock speed of your Portable Plus, you can run Lotus 1-2-3 and other applications 60% faster than before. Our trained technicians perform the upgrade and can have Plus back to you the next day. Call for appointment.

P+

### 128K/256K to 512K Upgrade

If you have Portable Plus model 45711A, B, C, or D, we'll upgrade your unit from 128K or 256K to 512K. Call for appointment.

### Software on ROM

Best-selling programs available on P.Plus ROM chips via our ROM Back-up service. Saves valuable electronic disk space, minimizes need for disk drive.

### Used HP Portable Equipment

HP110s, P.Plus's, HP9114s, ROMs, RAM drawers. HP quality makes used HP products a great buy. 30-day return policy plus one-year guarantee (parts and labor).

### Video: How to Use 110, P.Plus

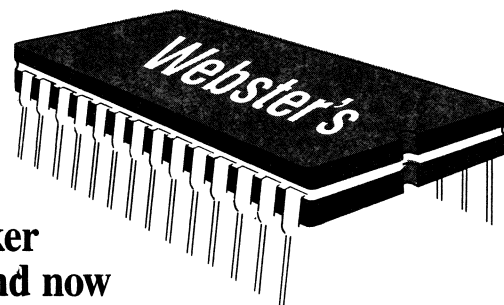
5-hour, 3 VHS videotapes. Contains fundamentals of using HP110, Portable Plus. Saves countless hours learning or training others. For novices and intermediate users.

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PRICE LIST ..... Center Spread

# Portable Plus users: At last! A great spelling checker available on ROM!



**Webster's** (web'stərs) n. The spelling checker rated Editor's Choice by *PC Magazine* (Dec. 24, 1985), and now available from Personalized Software for the Portable Plus and HP150.

—Customized on 3½" disk by special arrangement with Simon & Schuster, Inc.

*PC Magazine* rated eight leading spelling checkers for ease of use, flexibility, speed, overall program size, thoroughness, and accuracy. WEBSTER'S NEW WORLD SPELLING CHECKER came out on top—for a number of good reasons:

First, there's sheer size. WEBSTER'S contains over 110,000 words in its dictionary—five times the number in Hayden's Speller, 2½ times as many as in The Word Plus—yet WEBSTER'S dictionary and main program take up only 207K of disk memory.

Second, WEBSTER'S isn't just easy to use—it's positively a *pleasure*. It reads your files at high speed, then displays every questionable word *in context*, highlighted. At the same time, in a "window" off to the side, it gives you a list of possible correct spellings. A simple menu gives you the following options:

- Accept the word as is
- Replace the word with one of the suggested spellings
- Enter the correct spelling manually

#### RECOMMENDED FOR:

HP110 Portable	Portable Vectra	●
Portable Plus	HP150	●
IBM PC and compatibles		●
Available on ROM Backup for the Portable Plus		

- Add the word to an auxiliary dictionary of frequently used words
- Replace all other occurrences of the word
- Look up the spelling of any other word at any time

WEBSTER'S also lets you mark in your text any spelling corrections that change length of a word; this lets you quickly locate portions of text that may need reformatting.

WEBSTER'S will automatically locate double repetitions (like "and and"). It can correct transpositions ("itme" becomes "item"), missing apostrophes ("dont" becomes "don't"), and *typos* of all kinds ("spelling" becomes "spelling," etc.).

If you're not sure of a word, you can even *spell it the way sounds*, and chances are WEBSTER'S will supply the correct spelling. ("Fenomenon" gets corrected to "phenomenon," for example.)

In addition, WEBSTER'S will let you preview a list of all questionable words *before* displaying them in context; this saves you time because it lets you eliminate words from the questionable list (or add them to your auxiliary dictionary) before you begin the editing pass.

John Dvorak, writing in the *San Francisco Examiner*, called WEBSTER'S "the

best spell-checker we've seen in a long spell." Henry Kisor of the *Chicago Sun Times* has called WEBSTER'S "the best proofreading software on the market." We agree with them both—and we think you will too. Order your copy at no risk today.

**Webster's Spelling Checker on 3½" disk customized for the Portable Plus and HP150 . . . . . \$79.95**  
**\$69.95 for Portable Paper subscribers.**

PRODUCT NO. WB11NS

**Webster's is available on ROM backup for an additional \$179. See ROM ad in this issue for important details.**

**WEBSTER'S SPELLING CHECKER** works with any file produced by the Editor, WordStar, and MemoMaker. It also works with ASCII files produced by MS Word and Word Perfect.

Our version of WEBSTER'S includes a customized 3.5" disk and simple instructions for running the program on the Portable Plus and HP150. A special utility allowing WEBSTER'S to run on the HP150 is included on the disk.

#### 60-DAY MONEY BACK GUARANTEE

See order form for details.

#### TO ORDER

Use enclosed postage-paid order form or send check or credit card information (#, exp. date, signature) to:  
**Personalized Software**  
P.O. Box 869, Fairfield, IA 52556 515/472-6330

**Attention HP110 Users:**

**Order WordPlus for your  
Spell-checking needs!**

**HP Portable users:**  
Sorry, WEBSTER'S won't run on the 110;  
your best bet is THE WORD PLUS, another  
top-rated spelling checker available from  
Personalized Software.

© Copyright 1987 Personalized Software

**PV** PV users: Please subtract \$10 from subscriber price (since we don't have to send you additional customized disks or extra documentation). Be sure to indicate "PORTABLE VECTRA" on your order.



# PUBLISHER'S MESSAGE



Hal Goldstein

## Can You Help Us? I need your advice!

### THE PAST

Five years ago this June, my wife and I sent out our first mailing to 1700 HP-110 Portable owners asking them to subscribe to an as-then, non-existent newsletter -- *The Portable Paper*. Many of you were among the first to send in your subscription fee, and with that revenue we started

Personalized Software. Gradually, as opportunities presented themselves, our business grew. We now sell a complete line of software and used HP equipment in support of the HP-110, Portable Plus, LS/12, Portable Vectra CS, and the HP-150. In addition, this year we started *The UltraLite Connection*, a magazine modeled after *The Portable Paper*, and supporting the NEC UltraLite. With your continued support (as unbelievable as it may seem given our small market niche) we currently employ 20 service-oriented individuals.

### THE PRESENT

Our work with the NEC UltraLite represents less than 5% of our business and has not grown as we had hoped. That means our support for HP machines, all of which are no longer manufactured, constitutes the bulk of our business. In the short run this has actually been a boon for us. We're the only people in the world (including HP) who actively support these high-quality machines. Hewlett-Packard personnel kindly send HP-150 and HP Portable customers our way on a daily basis. Our HP-150 and HP Portable business, as well as a large inventory of just-like-new HP Portable Plus computers, should sustain our business for awhile. However, it is obvious that we must get into new markets. We also must decide how long and in what way we should continue to support our HP Portable customers.

### THE FUTURE

This is where I could use your advice. First of all, how should we continue *The Portable Paper*? We currently have about 1200 paid subscribers. Based on past experience about 33% do not renew. Because HP Portables are no longer manufactured, new subscribers are harder to come by. This is the case even though there are still many HP Portable users who have not heard of us, or who recently obtained an HP Portable from someone who does or did subscribe. My current feeling is to publish *The Portable Paper* in 1991 with an Index and Subscribers Disk. Perhaps we will lower the subscription fee to \$35 and publish it four times a year. We would continue to cover the HP-110 and Portable Plus as before. However, we would cover the LS/12 and Portable Vectra only as relevant items came our way, eliminating the Vectra Views

FOR HANDY REFERENCE: Items *directly* relevant to the three

HP Portables are denoted in this issue as follows:

110 110 Portable P+ Portable Plus PV Portable Vectra LS/12 Vectra LS/12

When items are *partly* or *indirectly* relevant they are denoted as:

110 110 Portable P+ Portable Plus PV Portable Vectra LS/12 Vectra LS/12

column. I am most interested in your feedback on this. Please, drop me a note, give me a call, or mention your opinion to one of our salespeople.

I would also like your ideas (or better, practical guidance) regarding the redirection of Personalized Software in the coming years. Our strengths include a true customer service orientation, your good will, a five year track record producing a useful, well-received computer-oriented newsletter, strong marketing abilities, a knowledgeable and talented sales force, order fulfillment capacity, and strong ties to Hewlett-Packard. We are limited in the areas of capital, sophisticated order processing machinery, and in R & D personnel.

Until recently I thought in terms of producing additional newsletters on portable computers. However, the new crop of portables do not seem to produce long-term loyalty, nor do they possess the unique qualities of the HP-110 and Portable Plus. Based on our experience so far with *The UltraLite Connection*, I am not sure this is the way to go.

The other direction that I have toyed with is used computers. We are still exploring possibilities. However, with the cost of new computers coming down so much, there may not be that much room left to make a profit and continue to service customers well. Because of the exceptional quality and uniqueness of the HP-110 and Portable Plus, this continues to be a good market. The trick would be to find other similar markets.

The more I think about it, the more I would like to continue to hitch our wagon to HP. HP certainly has its foibles, irrationalities, and inconsistencies--qualities that make HP at times incredibly frustrating to deal with. Despite all this, Hewlett-Packard continues to be a great company and a role model for other businesses -- large and small. HP is a company that makes the world better in how it operates, in how it treats its people, and with what it produces.

Currently, I have two ideas that relate to HP products (both of which would, hopefully, allow us to keep some of you as customers). The first has been gestating for several years.

I would like to create a catalog or newsletter on HP printers, particularly on the LaserJet and DeskJet. There are millions of these printers in use and hundreds of products that enhance their usefulness. We would be in competition with a number of companies that produce catalogs and magazines that in some way service these printers. However, I feel we have the strengths and focus to make a real contribution in that marketplace.

The second possibility would be "NewWave News," a publication on HP's new, highly-acclaimed, high-end, graphical, object-oriented user interface. We could bring together NewWave knowledge and product information as we have done with *The Portable Paper*, supporting both end users and developers.

### HP EMPLOYEES, CAN YOU HELP?

I hope *Portable Paper* enthusiasts within HP are reading this message and want to work with us. *The Portable Paper* increased the value and sales of HP Portables. We

can similarly add value to other HP products including HP printers, NewWave, and other product lines. Readers within HP, please contact me directly and see if we can work on something jointly. Cooperation and any mutual effort between HP and Personalized Software is tremendously helpful for us in launching projects like these, especially for a small company like ourselves working with a giant like HP.

Also, other readers who can further our thinking or work with us in some way should give me a call, or talk with one of our sales people (Brian, David, or Dee.)

## IN THIS ISSUE

Sorry we're so late, but I think you'll find the wait worthwhile.

All HP Portable users should head for the first article in 110% in which I talk about two free utilities, LZEXE and SCRNCH. These programs can save you lots of disk space. Once your appetite has been whetted you can go to David Hughes' *On My Soap Box* and Ed Keefe's *Looking Glass* columns for more information on these programs. As usual, you'll find Tom Pages *Savvy User* filled with ideas about how to use your HP Portable more intelligently.

Portable Plus users will be excited about our new ROM burning kit. Any Portable Plus user can now create a 128K ROM for their ROM drawer directly from the Portable Plus in less than half an hour.

Thanks to the handiwork by the authors of As-Easy-As, a highly-acclaimed, inexpensive Lotus 2.01 work-alike, Portable Plus users now have a choice of spreadsheets.

Users will be able to run As-Easy-As from their electronic disk or from ROM.

HP-110 users will find rich material from avid user Tom Morgan in the 110% column. Portable Vectra and LS/12 owners will find that *Vectra Views* contains a nice summary of all specialized products that work with their computer.

Finally, all HP Portable users should appreciate our 110% articles on hidden keys.

Be sure to take the time to look over our new Portable Equipment Exchange brochure. If you ever had difficulty explaining why the HP-110 and Portable Plus are such great machines, you now have lots of ammunition. If you need extra copies of the brochure, I would appreciate it if you would call. We'll be happy to send you as many as you wish. Be sure to note that a just-like-new Portable Plus, which last September retailed for \$2795, can be purchased now for \$995.

Also, take a look at the newly-organized price list at the center of The Portable Paper. Director of sales Brian Teitzman completely reorganized the list and made sure every product available for the HP Portables is on it.

*Hal Goldstein*

## LETTERS

### OK to Include Addresses of Writers?

110  
P+  
PV  
LS/12

Would you please consider either appending the complete mailing addresses of the writers of the letters which you publish, or forwarding letters from your readers to those writers.

**John Hubbard**  
62 Woodview Dr  
Orchard Park, NY 14217  
*[We'll go ahead and see how readers like it. Let us know how you feel about this and we'll go either way -- Rich.]*

### Needs Help with EPROMs

I need help with using EPROMs in the software drawer of the HP Portable Plus. I read your comments in Portable Papers and hope you will be successful in your EPROM burner project. I just ordered the Technical Documentation from you thinking that might help.

1. What kind of EPROM can be used (27512)?

2. When I type DIR B: the list identifies the subdirectories of the ROMs I have plugged in. I can change to a subdirectory and list the programs in the subdirectory. I can also run these programs while I am in other directories as though they were included in a PATH command.

I have burned an EPROM using Needham's Electronic EPROM burner which is a card that goes in the IBM PC. The software (IEPROM) verified the program had been successfully transferred to the 27512 EPROM. However, it does not show up in a directory and I can not run the program.

- A. What code or procedure is needed to either program the EPROM or to have the Portable Plus find and run the program?
- B. Can a data file of numbers created by Basic be accessed?
- C. What is to be done so that the subdirectory of programs in the EPROM will show up?
- D. Can the programs burned into the EPROM be run from other directories like the HP ROMs can be run?
- E. What procedure do you follow to have more than one program burned into and run from the EPROM?

3. Is there any literature or documentation somewhere that you might know about that would help?

Thanks so much for your thoughts.

**Richard A. Hunter**  
6709 Lookout Bend  
San Jose, CA 95120

*[First of all, be sure to read the lead article in the News From Personalized Software about our new ROM burning kit. If you are on a budget or can't wait and you are somewhat technical, here are some hints. We use a 27C512, 12.5 volt 64K byte EPROM. You can order this from us or save \$7 and look in the back of Byte Magazine.]*

*On the CompuServe HP Forum, you will find three helpful files on how to do it yourself: ROMDOC.TXT, APBURN.COM, and PPPROM.ARC.*

*You can put anything you wish in ROM such as a BASIC data file of numbers. You can put as many files or programs you can fit on a ROM. Unless you run out of environment space, subdirectories in the B ROM will automatically be a part of the DOS path. That means you can normally run any ROMed program from PAM or DOS by just typing its file name.*

*We will do our best in our manual included with our ROM burning kit to make things as simple and straightforward as possible -- Hal.]*

**110 Support the Boat People**

**P+** As per our recent telephone conversation, I think you people are really missing a marketing opportunity by apparently not going after boat people. There are a lot of people here who live on boats, and every one that I know either has a laptop or wants one.

Biggest gripes are "can't charge it on 12 volt boat system", "not enough time on a battery charge", or "disk drive keeps crapping out due to elements or getting bumped". There are a lot of talented boat people who spend (or would like to spend) a lot of time on creative writing.

Also a lot of people have kids on the boat with not enough to do. Also, navigation; I know that HP has a navigation program for the HP41C series and may have one for its laptops. These machines are absolutely perfect for boats or RVs.

We need a sales area here where people can look/see. Almost all folks I run into who know computers have never heard of an electronic disc drive nor can fathom how it might work.

**Robert A. Moorhouse PE**  
P.O. Box 37  
St John, Virgin Islands 00830

**110 Portable Plus  
P+ Excellent Investment**

I have been a subscriber to the Portable Paper ever since the first issue concerning the HP-Portable Plus and I am ashamed to admit that even after using some of these very helpful, contributed software routines from subscribers disks, I somehow failed to thank you properly. Lately, I started using the DISKPACK Program, the XCOPY and then, I used the RDTEST program to locate a contaminated file which caused a lock-up. I was able to save the good files up to the error, reformat the "A" drive, (the "E" disk) and replace those contaminated files and the others up to the end of the "E" disk from a back-up disk. Thank you all again!

I keep hearing that the HP-Portable Plus is a poor investment because there is no software for it, NO WAY! I feel that I am doing quite well with Microsoft Word and ECM, (The Executive Card Manager), is absolutely GREAT for listing software. I list the NAME of the program, the DISK-LABEL and the DIRECTORY on one line, (in labeled spaces) and use a second full line for descriptive information. This allows printing 22 cards on an 8 1/2" sheet, sorted any way you like for ready reference. Besides, the BASIC, MEMO-MAKER/TIME MANAGER, LOTUS 123 etc. Personalized Software and its other associated people contribute VASTLY MORE to this letter GEM.

I just hope Hewlett-Packard will wake up and realize that these disk-based machines simply cannot compete with a computer with a good NON-VOLATILE

memory of adequate capacity, it should of course, be able to read ALL IBM software media and to display the same amount of material and graphics as a regular monitor, add color, and you've got it made!

The HP-IL System is just fine with me, these large, heavy RS 232 cables for a portable application are ridiculous, besides, you can have as many drives, up to 8, and other devices (including disk drives), up to 30, in the loop, and they can be scattered all around, as much as 10 meters, (more than 30 feet) apart, quite inexpensively and above all, quickly and easily, (important in technical applications).

**Gerald S. Watry**  
4210 W 108th St  
Bloomington, MN 55437

**Problem with  
Function Keys**

**110** I used to be able to use the function keys when in DOS (HP-110), but now whenever I press any menu or function key, I only get some garbage characters on the screen (2 or 3). Why did this start happening? Does using FORMIB, XCOPY or some of the other utilities I got from you have anything to do with it? This never used to happen before I started using the disks you sent me. How do I reset it back without losing all of my configurations, etc?

Also, is there some shorter program that would let my HP-110 be used over a modem (with XModem). I have a 1200 smart modem (Hayes compatible with X4 command set).

**Peter Sterba**  
544 Santa Alicia  
Rohnert Park, CA 94928

*[There are simple HP-110 and Portable Plus communications programs on the HP CompuServe forum. The symptoms you describe take place if you are not in HP mode but in ALT mode. Enter System Config (f6) from PAM. On the HP-110 there are two choices and on the Portable Plus, one choice, to put your Portable into HP or ALternate mode. Make sure you are in HP mode -- Hal.]*

**Two New Shell Programs**

**P+** While looking for a suitable Shell program for my IBM compatible clone, I came across two shells that also may work on a Portable Plus. Contained within the installation procedures for both of these programs is the option to use the MS-DOS BIOS calls necessary for non-IBM compatibles. The few examples given are known to me as being only partly compatible. (Sanyo and Tandy).

The two programs are Still River Shell version 2.36 dated 10/18/87, using the /B option in the command line, and Xtree version 2.0 dated 11/3/85. Still River

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POSTMASTER: Please send address changes to Personalized Software, The Portable Paper, P.O. Box 869, Fairfield, IA 52556.

Shell is available through the usual shareware channels and Xtree is a commercial program produced by: Executive Systems in San Luis Obispo, CA 93401.

*(Letters continued on page 40.)*

110%

## Making More of Your HP Portable

by Hal Goldstein

## Two Important FREE Space-saving Utilities Available For HP Portable Users

By Hal Goldstein

### WHAT THEY DO

LZEXE and SCRNCH are two space-saving utilities that have come to our attention recently. Both David Hughes and Ed Keefe discuss them in their columns, but because these utilities are so potentially useful, I wanted to briefly add my comments and discuss the various ways you can obtain them.

All applications that run on HP Portables, or any MS-DOS computer, include one or more program files that end with an EXE or COM extension. SCRNCH and LZEXE compress the size of most EXE and COM program files.

The thing that makes SCRNCH and LZEXE attractive is that after SCRNCH or LZEXE have compressed an EXE or COM program file, the compressed program still runs. For example, I compressed The Editor II, Personalized Software's word processing program that is normally about 39K. Both SCRNCH and LZEXE compressed it to around 23K. When I call the compressed program up from DOS or PAM it takes a little longer to uncompress and load, but runs fine.

SCRNCH also compresses data files (word processing text files, or spreadsheet files) by translating them into much smaller program files (which are renamed with a COM or EXE extension). Type the name of the file without the extension and the compressed file returns to its original form.

### LIMITATIONS

SCRNCH works on all four HP Portables including the HP-110 and Portable Plus. LZEXE only runs on true IBM compatibles like the LS/12 and Portable Vectra CS. It does not run on the HP-110 or Portable Plus . . . however, its resultant compressed files do run on any HP portable.

The biggest problem for HP-110 and Portable Plus users is that SCRNCHed or LZEXEd files need more main memory than normal to run, since they initially need a little extra room to decompress. For example, the main As-Easy-As EXE file takes around 210K of electronic disk space and about 280K of main memory to run and have room for a spreadsheet file. When LZEXEd, the As-Easy-As EXE file takes up about 110K of disk space but needs about 340 of main memory to run. Smaller program files such as The Editor and FilePlus will probably work with your current

internal (main) memory setting as it is. According to LZEXE's author, subsequent versions may address this memory issue. We'll keep you posted.

The other significant problem is that SCRNCHed files take longer than LZEXEd files to initially load. LZEXEd files load almost as quickly as uncompressed files. However, you may have to wait as long as three to five seconds for a SCRNCHed file to load. SCRNCH also takes a much longer time to originally compress a file than LZEXE takes.

Finally, the LZEXE program was written in France. The documentation has been translated to English, but the program's messages are still in French. This can occasionally be a problem to non-French reading users, but overall you shouldn't have difficulty.

### HOW TO OBTAIN THESE UTILITIES

SCRNCH was originally a shareware program. However, I talked with the author, and he told me he is no longer supporting the product and would not cash any shareware checks sent to him, so it is now freeware. LZEXE has been put in the public domain and is free. In addition, I am starting to notice announcements on CompuServe about support utilities written by other authors to make LZEXE even easier to use.

You can obtain these utilities through the following sources:

1. You will find both these utilities and support utilities in the CompuServe IBMSYS forum in Data Library 6. The LZEXE utility is likely to also be found in local bulletin boards.
2. You can take up Ed Keefe's offer at the end of his Looking Glass article. Send Ed a formatted 3.5 inch disk and a stamped self-addressed mailer, and he will copy the files for you at no charge. Ed is using his own time to do this so please be sure the disk is formatted and that the mailer is properly addressed and contains enough return postage. Please send the disk and mailer to Ed Keefe, not Personalized Software, to Fastaid Company, 314 SW Logan, Ankeny, IA 50021.
3. Purchase our ROM burning Kit described on the back cover. We will include both SCRNCH and LZEXE.
4. Wait until Fall. We will include the latest versions of these utilities along with other supporting utilities on the 1991 Portable Paper Subscribers Disk. It is likely we will complete the disk early this year to encourage early renewals.

New software breakthrough!

# 50% more file space for as little as \$89.95!

- **Easy to use**—if you can save a file, you already know how to use **SQUISH PLUS**!
- **A must for every HP Portable owner**—ROM Backup version especially valuable if you use a **Portable Plus**! (Sorry, **SQUISH PLUS** doesn't run on the HP110.)

It isn't often we find a program that's a must for every portable user, but Squish Plus is just such a program.

Squish Plus lets you increase your disk storage space by 50% or more for as little as \$89.95—without having to install any hardware or learn any new commands.

Squish Plus compresses files, saving them much more efficiently than DOS. For example, a word processing file of 50K might only take 30K using Squish Plus.

## COULDN'T BE EASIER!

To use Squish Plus, you simply add a new drive letter to your system (for example, e:). If you wish, the new "drive" can be password protected.

Then, whenever you save files to the new "drive," Squish Plus compresses them automatically. When you retrieve a compressed file, Squish Plus automatically expands it to its normal size.

The saving in disk space is enormous: Squish Plus compresses data files (spreadsheets, text documents, databases) by 30-70%, and compresses program files by 5-25%. On the average, *you will increase the amount of data you can store on a disk by 50% or more!*

Note: All your other software can use the compressed data *as is*. There are no new commands to learn. You set up directories and perform all file operations—save, retrieve, copy, rename, backup, etc.—the same way you always do. (File backup takes up fewer disks, of course, and is significantly faster.) You can even use the Norton Utilities "Undelete" program to re-

cover compressed files that have been deleted!

Initial set up is easy too. There is no need to reformat or repartition your present disk. All you do is install Squish Plus as a "device driver." (You don't even have to know what that means. The manual—one of the best we've seen—walks you through the procedure in 5 minutes.)

## ANY DRAWBACKS?

Other file compression programs impose a speed penalty. But Squish Plus is so efficient *there's virtually no loss of speed*—especially on the Portable Plus—except perhaps for a slight additional wait with some of your program files and largest data files.

Other file compression programs also set aside a significant amount of internal memory space for file decompression. But Squish Plus uses only 36K of memory for everything.

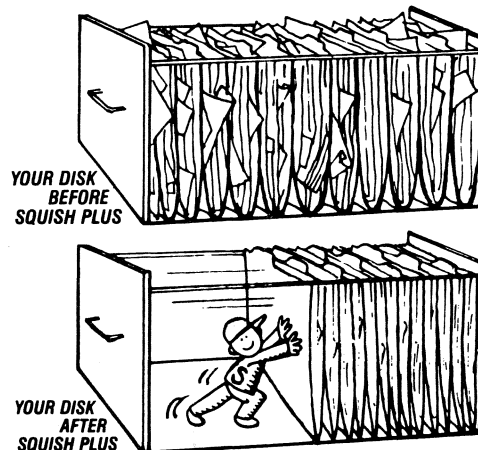
(Portable Plus users may need to increase internal [main] memory by as much as 36K. On the Portable Vectra and LS/12 Laptop, Squish Plus simply borrows 36K from the 640K of memory that's built in.)

## WHAT ABOUT DISK SPACE FOR THE PROGRAM ITSELF?

The files on the Squish Plus disk total 139K, including several Squish Plus utilities.

Portable Plus users can get by with just 54K by eliminating all but two essential Squish Plus program files. (You can even reduce your Edisk space requirement to zero if you're willing to disable PAM and load Squish Plus from an HP9114 each

RECOMMENDED FOR:	
HP110 Portable	
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●
Available on ROM Backup for the Portable Plus	



**SQUISH PLUS "compresses" your files so they take up less disk space!**

time you reboot).

A better alternative—and the one we recommend—is to purchase Squish Plus on ROM Backup (see box below).

Whatever computer you use, *there is no other way to expand your file storage space that is as easy or economical as Squish Plus*. Order your copy at no risk today.

	Retail Price	Subscriber Price
<b>Squish Plus for IBM PC compatibles</b>	<b>\$99.95</b>	<b>\$89.95</b>
PRODUCT NO. SQ12NS		
<b>Squish Plus for Portable Plus</b>	<b>\$129.00</b>	<b>\$99.95</b>
PRODUCT NO. SQ11NS		
<b>Rom Backup Package (includes Squish Plus for Portable Plus on disk and two 64K Backup ROMs)</b>	<b>\$264.00</b>	<b>\$234.95</b>
PRODUCT NO. SQ11NK		
<b>Squish ROMs (Must own Squish Plus for Portable Plus for each ROM set purchased)</b>	<b>\$135.00</b>	<b>\$135.00</b>
PRODUCT NO. SQ12NR		

## 60-DAY MONEY BACK GUARANTEE

See order form for details.

## TO ORDER

Use enclosed postage-paid order form or send check or credit card information (#, exp. date, signature) to:

**Personalized Software**

P.O. Box 869, Fairfield, IA 52556 515/472-6330

## IMPORTANT MESSAGE FOR PORTABLE PLUS USERS

### Special Portable Plus version

The authors of Squish Plus have worked with Personalized Software to create a customized version that runs on the Portable Plus. *This version is available only from us*. Be sure you specify "PORTABLE PLUS VERSION" when you order.

### Buy Squish Plus on ROM!

With disk space at a premium in the Portable Plus, the best way to buy Squish Plus is on ROM Backup.

Our exclusive ROM Backup package includes the Squish Plus disk, and two ROMs—128K total—that contain all the Squish Plus files (except for one that you'll never need).

With Squish Plus on ROM, all the useful Squish Plus utilities will always be available, and you won't have to give up any disk space at all.

## CALL NOW!

# 515-472-6330

## REPORT YOUR FINDINGS

Write us about your experiences using these utilities in the HP Portable environment. Other users will benefit from your findings.

## Lotus 2.2 on the Portable Plus and HP150 Getting Closer

**P+**

Thanks to extraordinary cooperation from Lotus corporation, and in particular from Lotus representative Sandy Peco, there is about an 80% chance that we will be able to provide version 2.2 of Lotus 123 for HP Portable Plus and HP150 users. Further, users will be able to upgrade their existing version of Lotus 123 to version 2.2 through Personalized Software.

With our new ability to burn 128K ROMs discussed elsewhere in this issue, we should be able to put most of Lotus 2.2 on ROM. However, unlike the older HP versions of Lotus, Lotus 2.2 will not execute out of ROM and thus requires about 300K of main memory to run.

If we do get Lotus 2.2 to work, you will receive a special mailing - hopefully within the next two months. Lotus will let Personalized Software upgrade existing users at two distinct time periods. This will save you from having to upgrade from Lotus directly and then coming to us for the additional HP150 or Portable Plus materials. For example, if all goes well we will send out a mailing that will ask you to order your upgrade from us by July 1, and you will receive your upgrade by August 1. We would then repeat the process in, say, November. Larger companies such as HP, 3M, Westinghouse, and Proctor & Gamble will have more flexibility since they have prior agreements with Lotus about upgrading.

## Latest Microsoft Word Version May Become Available to Portable Plus and 150 Users

**P+**

Thanks to the persistence of reader Frank Keresztes-Fisher Microsoft has agreed to let us modify the source code of the MS Word screen driver so that it will be made to run properly on the HP150 and Portable Plus. Once modified, hopefully, the latest version of MS Word will work on the Portable Plus and HP150.

By the time you read this, we may have found someone to rewrite these drivers. However, if you are interested in working on the project, give me a call as soon as possible.

## More Hidden Keys for the HP Portables

*By Richard Hall*

The last issue of *The Portable Paper* (Vol.5, No.2, Pg.8) discussed some of the useful things you can do with different key combinations on the 110 and Portable Plus.

In this issue we will discuss some more "hidden" keys. First, we will describe the control key combinations that work on all four HP Portables. We will also discuss the Extend Char key combinations that work on the HP-110 and Portable Plus. The next issue will conclude this series of articles by examining DOS function keys and the useful, and often overlooked DOS EDLIN program.

## DOS CONTROL KEY COMBINATIONS

**110**

**P+**

**PV**

**LS**

**12**

Control key combinations are accessed by pressing the Control (CTRL) key and another key down at the same time. On the Plus and 110, Extended Characters are typed by pressing the Extend char key and another key down at the same time (see extended character keyboard next page).

Listed below are the more commonly-used DOS control key combinations. Additional information and examples will be found next issue in the EDLIN article.

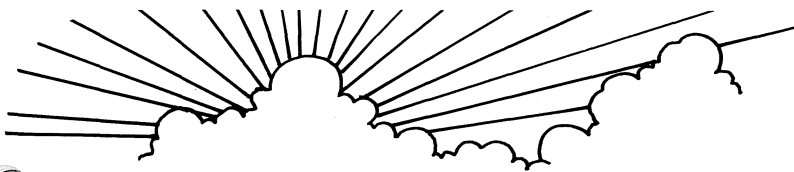
- **Ctrl-C** -- aborts the current command. If you're in the middle of a DOS command or running a batch file you can terminate them by pressing **ctrl-c**. You also use this command to exit the INSERT mode in EDLIN. (See CTRL-S below for temporarily stopping a DOS command or batch file.)
- **Ctrl-G** -- causes the computer bell or buzzer to ring. Put a CTRL-G at the end of the last line of a batch file and the computer's buzzer will ring after the last line of the batch file is executed.
- **Ctrl-H** -- backspaces and removes the last character from a command line (like pressing a backspace key). If you make a mistake while typing a DOS command or writing a batch file in EDLIN, you can press **ctrl-h** (or the backspace key) to erase the last letter in the line you just typed.
- **Ctrl-I** -- is like pressing the TAB key.
- **Ctrl-J** -- causes a line feed. Place a **ctrl-j** in a document to be printed on the ThinkJet, and it will cause a linefeed at the point it occurs. More than one **ctrl-j** will cause more than one linefeed.
- **Ctrl-L** -- causes a formfeed. If you want to make sure the last page of a document is ejected from a LaserJet or DeskJet, use EDLIN or The Editor to place a **ctrl-l** at the end of the document you're printing and it will cause the last page to formfeed (and eject).

You could use EDLIN, The Editor, or the COPY CON command to create a batch file called FF.BAT which would contain the following command:

```
echo ^L > prn
```

The ECHO command followed by **> PRN**, sends a **ctrl-l** to the printer, and causes a formfeed. So by creating FF.BAT with this line in it, all you would have to do is type **ff** from DOS and your printer will formfeed and eject a page. (Remember that **^L** indicates pressing **ctrl-l**, you do not type the **^** and **L** characters separately.) A similar file could be created using one or more CTRL-Js to create one or more line feeds.





# The Editor II It's way beyond MemoMaker!

You won't believe all the word-processing features this \$129\* program contains—and it takes up less than 40K of memory!

\* (only \$99.95 for Portable Paper subscribers)

By Hal Goldstein

Let's face it: MemoMaker is an adequate word-processor, but it has its limits. No search and replace. No simple way to merge files. No destructive backspace key. (To delete the last character you have to use the left arrow key and the deletion key[s].) No compressed or expanded printing. No...—but why go on? If you use MemoMaker, you probably have your own list of things you wish it could do.

Well we have good news! Now there's an easy-to-use text editor that runs on the Portable and Portable Plus that will satisfy almost every item on your wish list. And the program comes with a built-in bonus: It also runs on the HP 150, IBM PC, and HP Vectra, which means that **now you can use the same program and files on your desktop that you use on your Portable.**

The program is called THE EDITOR II. It does everything MemoMaker does plus a heck of a lot more. And you don't have to go to the expense of buying WordStar (for the Portable) or MS Word (for the Plus) to go beyond MemoMaker's capabilities.

THE EDITOR II's most valuable features are listed on the chart to the right. It's quite a list, isn't it? To me, THE EDITOR II is a real blessing. I use it daily instead of MemoMaker, and I've silently given thanks to its author, Ed Gilbert, many, many times. Just a few minutes with THE EDITOR II (that's all it takes to be up and running) and I think you'll be a fan of his too.

In addition to the great features listed to the right, there are six more I especially want to emphasize:

1. THE EDITOR II's Lotus-like menus make it incredibly easy to use.
2. THE EDITOR II creates ASCII files, which means you can send your files to and from almost any other program or computer without special formats or codes.
3. THE EDITOR II will automatically back up your files to protect you against mistakes: When you save a file, THE EDITOR II saves not just the current version, but the previous one as well.

## The Formatter

THE FORMATTER gives you advanced formatting capabilities that even THE EDITOR II can't handle—like: multi-line headers and footers • automatic hyphenation (you can even add your own words to the built-in dictionary) • user-specified page length and line length • automatic page numbering • tables and charts • table of contents generation • and more.

THE FORMATTER works by imbedding special formatting codes into your EDITOR II, MemoMaker, or other ASCII text files. You can customize THE FORMATTER for almost any printer.

4. THE EDITOR II takes up less than 40K of memory.
5. THE EDITOR II loads and saves files and executes commands exceptionally fast.
6. THE EDITOR II comes with a well-written reference manual and a step-by-step tutorial.

Even in the desktop market, **it is difficult to find a word processor with this many useful features at this low a price.** For the Portables, THE EDITOR II simply can't be beat. See for yourself: Order your copy, risk-free, today.

THE EDITOR II on disk ..... \$99.95  
Portable Paper subscriber price .. \$79.95

PRODUCT NO. ED11NS

ROM BACKUP version ..... \$194.95  
(THE EDITOR II on ROM and disks)

PRODUCT NO. ED12PP

For users of Version I or SuperROM:

EDITOR II Upgrade Kit on disk ... \$35.00  
PRODUCT NO. ED14NS

Upgrade Kit on ROM and disk ... \$58.00  
PRODUCT NO. ED15NR

### RECOMMENDED FOR:

HP110 Portable	•
Portable Plus	•
Portable Vectra	•
HP150	•
IBM PC and compat.	•
Available on ROM Backup for the Portable Plus	

**PV** PV users: Be sure to indicate "PORTABLE VECTRA" on your order so we can send you proper disk format.

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### Special combined offer— SAVE \$30:

THE EDITOR and THE FORMATTER together—  
Only \$119.95 total (Portable Paper subscribers only)

Note: The user manual itself is a challenge, and no technical support is available. We therefore recommend THE FORMATTER for strong computer users or those already familiar with text formatters.

If you need any of the features listed above, and if you're willing to spend the time it takes to learn the commands, THE FORMATTER is for you. Order your copy, risk-free today.

THE FORMATTER ..... \$59.95  
Portable Paper Subscriber price ..... \$49.95

THE EDITOR II gives you all these great text-editing features and more:

- **Search and replace.**  
Just tell THE EDITOR II what word or phrase to look for, and it will display each occurrence and/or replace the occurrences either selectively or globally.
  - **Edit two files at once.**  
THE EDITOR II will display two separate portions of text at the same time, one above the other. You can view and edit two parts of the same file—or even two different files—simultaneously.
  - **Backspace delete.**  
You can erase the last character with a single keystroke.
  - **Block and line centering.**  
THE EDITOR II lets you center blocks and lines of text with a few simple keystrokes.
  - **Powerful macros.**  
Store any sequence of keystrokes and play it back at the touch of a single key. Macros can be edited, deleted, stored in files—even autoloaded on startup. THE EDITOR II comes with over two dozen macros to get you started.
  - **No limit on file size.**  
If you're an HP110 Portable user, you're no longer confined by MemoMaker's 819-line limit. You can have as large a file as internal memory allows.
  - **File merge.**  
You can merge two or more files together with ease.
  - **Compressed and expanded.**  
You can imbed control characters in your text to tell your printer to print all or part of your text compressed, expanded, bold, underlined, or whatever else your printer can handle.
  - **Unlimited line length.**  
Your files are no longer limited to 80 characters per line. This means, for example, you can print 132-character lines on your ThinkJet in compressed mode.
  - **Lines per page.**  
You can specify the number of lines per page, using the control codes required by your printer.
  - **Easy in, easy out.**  
You can exit from THE EDITOR II, run another program, then type a one-word command and be back in THE EDITOR II exactly where you left off. This includes exiting DOS—which means you can delete, copy, and rename files while running THE EDITOR II.
  - **Right justification and automatic paragraph indent.**  
A simple command right-justifies your text and automatically indents your paragraphs however many spaces you wish.
  - **Undelete.**  
A simple command will undelete the last line or block of text deleted.
  - **Upper/lower case conversion.**  
Another simple command lets you change between upper case and lower case without having to retype anything.
- In terms of useful features per dollar, THE EDITOR II is a truly exceptional buy. I urge you to try it. Order yours today.

*Hal Goldstein*

**PV** PV users: Be sure to indicate "PORTABLE VECTRA" on your order so we can send you the proper disk format.

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P+

PV

LS/12

- **Ctrl-M** -- is like pressing RETURN from the DOS prompt.
- **Ctrl-N** -- selects an alternate font (see comments on Ctrl-O next.) (HP-110, Portable Plus only).
- **Ctrl-O** -- selects the primary font. The Plus' built-in alternate fonts assign some line drawing symbols to some of the keys. You can use CTRL-O and CTRL-N to toggle back and forth between the alternate and primary fonts. (To see this go into your communications program and press **ctrl-n** and type something. You'll notice some of the characters are different.)  
NOTE: Its possible that you may start getting funny characters on the screen for no apparent reason and this may indicate that your Plus has switched fonts. This is especially possible during MODEM use where a CTRL-N could have been inadvertently transmitted over the telephone line. Try pressing **ctrl-n** or **ctrl-o** to get back to the right font.
- **Ctrl-Q** -- causes an interrupted file to begin again (see example in CTRL-S below).
- **Ctrl-S** -- suspends output display on screen. If you were using the DOS DIR command to display a long directory, or the DOS TYPE command to display the contents of a file, you could press **ctrl-s** to temporarily stop the scrolling display to look at something. Press **ctrl-s**, **ctrl-q**, or **any key** to resume the scrolling display.
- **Ctrl-X** -- cancels the current line, outputs a backslash (\), and wraps to the next line to allow you to enter a new line. If you were entering a line in EDLIN (say line #5) and decided you wanted an entirely new line #5, you could press **ctrl-x**. A \ would appear at the end of your current line, indicating that the line had been deleted. The cursor would wrap to the next line, waiting for you to type in a new line.
- **Ctrl-Z** -- inserts an end-of-file marker into the command line. If you're using COPY CON to create a batch file, you would type **ctrl-z** after entering the last line of the file to exit COPY CON and save the file.
- **Ctrl-[** -- inserts the ESCAPE CHARACTER into a line. An Escape Character along with other symbols create an

ESCAPE SEQUENCE used to define HP printer fonts and graphics and cursor-movement functions for the screen.

## EXTENDED CHARACTER KEYBOARD

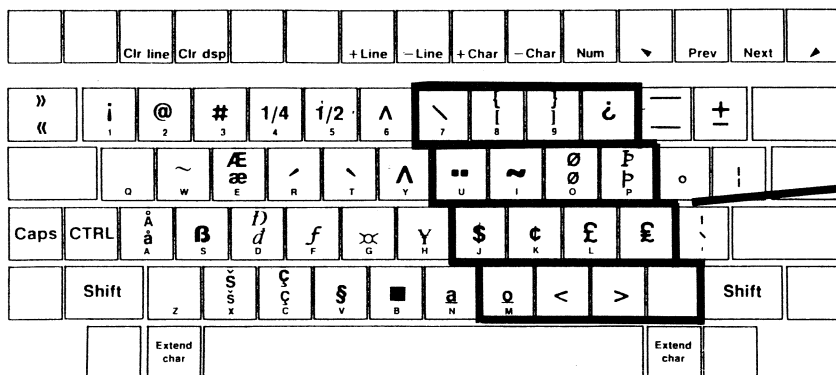
**110** When you hold down **Extend char** and press almost any character on the 110 or Portable Plus keyboard, an **Extended Character** is displayed. These characters include international currency symbols and characters needed for typing in several European languages. The DIACRITIC characters ` , ^ , , and ~ (located on the R,T,Y,U, and I keys in the diagram below) do not advance the cursor and will allow you to type characters such as *í, è, î, ô, and ñ*. All are from HP's Roman8 character set. The following additional functions are also assigned to some of the keys on the top row when used with the EXTEND CHAR (Ext) key:

- **Ext-f3** -- clears rest of the line after the cursor.
- **Ext-f4** -- clears the entire screen.
- **Ext-f5** -- adds blank line before line your cursor is on.
- **Ext-f6** -- deletes the complete line the cursor is on
- **Ext-f7** -- toggles between insert and replace mode
- **Ext-f8** -- deletes a space
- **Ext-Select** -- activates numeric keypad
- **Ext-left arrow** -- goes to beginning of document
- **Ext-up arrow** -- goes to previous page
- **Ext-down arrow** -- goes to next page
- **Ext-right arrow** -- goes to end of document.

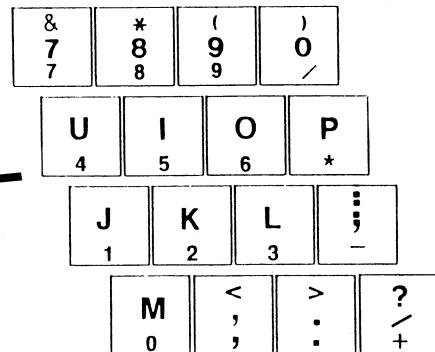
Note: The meanings of the Extended Keys are indicated on the front face of the top row of keys. Also, application programs may on their own redefine the keyboard. For example, MemoMaker uses these keys as defined above, whereas Lotus remaps the HP-110 and Portable Plus keyboard for its own use.

## NUMERIC KEYPAD

**P+** The numeric keypad on the Portable Plus only is located to the right of the center of the keyboard and is useful with programs that require you carrying out arithmetic functions (like Lotus 123, SHELF, etc.). The numbers 0-9, the arithmetic function symbols +, -, \* (for multiplication), and \ (for division), and the punctuation symbols (, and .) share 16 of the main keys on the Plus or 110 (see Numeric Keypad diagram included). Press **Extend char - Select** to activate the keypad. Press the combination again to deactivate the keypad.



Extended Character Keyboard



Numeric Keypad

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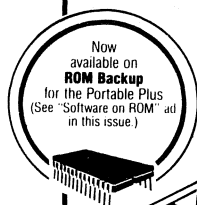
**(515) 472-6330**

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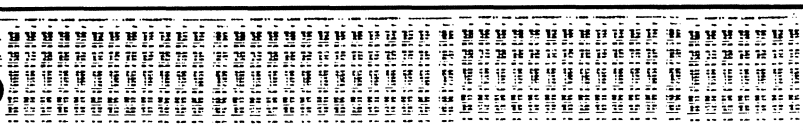
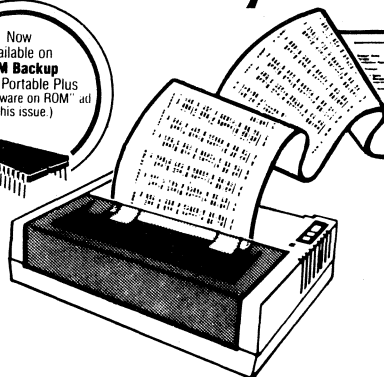
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For good buys on used—and new—HP equipment, see our 4-page brochure enclosed with this issue.

# No more cutting and pasting— Now you can print it sideways!



Now available on ROM Backup for the Portable Plus (See "Software on ROM" ad in this issue.)



# SIDEWINDER

SideWinder is published by Southern Software

## At last! Sideways printing for the HP Portable, Portable PLUS, and, ThinkJet!

(And the HP150, Vectra, IBM PC, MS-DOS computers, and most HP graphics printers.)

It's called SideWinder, and it's perfect for Lotus 1-2-3 print files, MemoMaker files, or any other text (ASCII) file that's too wide for a normal page.

Just type in the file name, and SideWinder does the rest, printing up to 53\*rows *sideways* - for as long as your paper supply lasts. You'll never need to cut and paste again!

SideWinder's high-quality graphics characters are indistinguishable from ordinary characters, and SideWinder prints just as fast as your ThinkJet can.

In addition, a built-in mini text editor lets you get inside your print files and easily create **double-width** characters and underlines.

**SideWinder . . . . . \$69.95**  
**\$59.95 for Portable Paper subscribers**

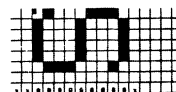
PRODUCT NO. SW11NS

SideWinder 1.01 owners may upgrade to current version 2.01, which supports 8 chars/inch, by sending Personalized Software \$7.50 or by mailing a self-addressed \$.39 stamped envelope and the SideWinder master disk.

RECOMMENDED FOR:	
HP110 Portable	•
Portable Plus	•
Portable Vectra	•
HP150	•
IBM PC and compat.	•
Available on ROM Backup for the Portable Plus	•

**OPTIONAL EXTRAS:** Southern Software of New Orleans, creators of SideWinder, have also created two companion utilities that work only on The HP Portables:

**SideChar** lets you create your own sideways characters.



SideChar  
to Build P to Print  
L to Load S to Save  
Select to toggle block  
Cursor keys to move

Simply fill in a grid on your Portable to modify SideWinder's built-in characters...create italics... Hebrew letters... integral signs... whatever sideways characters you wish.

**Sketch & Print** lets you make line drawings on your screen using the cursor and function keys.



Sketch & Print



It's a lot like those Etch/Sketch toys you played with as a child. (Actually, it's even better because you can draw not just horizontal and vertical lines, but also *diagonals* with a single key.) Sketch & Print also lets you print - and save - anything you draw on the screen.

**\$10 for both utilities when purchased with SideWinder**

★ For a complete graphics software program, see ad for "Sketch" in this issue.

Order form and guarantee are on inside back cover or send check or credit card number to Personalized Software, PO Box 869, Fairfield IA 52556 (515) 472-6330.

\*105 rows for QuietJet Printer

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# HPduette

***It transfers files both ways between your Portable Plus and your desktop computer without an HP-IL card!***

An HP-IL card inside your IBM PC or compatible computer lets you transfer files to and from your Portable Plus.

It's a good solution to the data transfer problem, *provided* you only use one desktop computer. But if you ever need to transfer data between your Portable Plus and someone else's desktop computer, you're stuck—or at least you were until now.

Because now there's a way to do it with software.

It's a program called HPduette. Together with a special serial connecting cable that it comes with, HPduette is all you need to transfer files at high speed both ways between your Portable Plus and any IBM PC compatible desktop.

RECOMMENDED FOR:	
HP110 Portable	Portable Vectra
Portable Plus	HP150
IBM PC and compatibles	

HPduette performs complete error checking during the transfer process to ensure data integrity. It handles multiple-file transfers, subdirectory transfers, and DOS "wild card" usage. It lets you use DOS commands such as type, list, rename, and erase without having to exit the program. And it transfers data *faster* than you can with an HP-IL card.

HPduette is easy to use too. Simple menus and easy-to-understand help screens are available at all times.

For true convenience in file transfer to and from your Portable Plus, order HPduette today.

**HPduette with cable for Portable Plus ...\$99.95**  
**\$89.95 for Portable Paper subscribers.**

PRODUCT NO. DU11NS

HPduette is a registered trademark of Platte River Associates, Inc.



**HPduette** comes with a serial cable and two disks; you load one disk into your Portable Plus and the other into the desktop.

HPduette transfers data at 57,600 baud. To use HPduette, you connect the 9-pin serial port on your Portable Plus to the serial port on your desktop computer using the serial cable that comes with the program.

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## List of Files in the CompuServe HP Forum HP Portable Data Library

As we have mentioned before, the HP forum on CompuServe is a great source of support for your HP Portable and other HP products. You can electronically send messages to other HP users and HP engineers. Also you can visit the HP Data Libraries and download interesting and useful articles and programs.

The HP forum has 13 Data Libraries, several of which are of interest to HP Portable users. The libraries are:

- |                          |                             |
|--------------------------|-----------------------------|
| 0 - New Uploads;         | 7 - HP-110/PortablePLUS;    |
| 1 - WP, DTP, Graphics;   | 8 - Handhelds;              |
| 2 - Data Mgmt, Datacomm; | 9 - HP NewWave;             |
| 3 - Utilities;           | 10 - New Products;          |
| 4 - Printers & Plotters; | 11 - General Interest;      |
| 5 - Vectra Specific;     | 12 - Patches;               |
| 6 - HP150/Touchscreen;   | 13 - Appnotes/Communicator. |

The following is a list of the files in the HP-110/Portable Plus Data Library 7. The type of file is indicated by a suffix where /a = ASCII and /b = Binary code. This information was extracted from the HPALL.ARC in DLO, which gets updated fairly regularly. HPALL.ARC contains a listing of all the files from all the data libraries. The version of HPALL.ARC used for this article was downloaded at the end of April. According to the text within HPALL.ARC, the file listings were accurate as of March 4, 1990.

FILENAME /TYPE	SIZE (KB)	UPLOAD DATE	DESCRIPTION OF FILE
PASS.INF /a	9	17/12/89	Passport: power mgmt/master control for LS/12
PERSVI.ARC /b	90	10/12/89	Demo vi-type full-screen editor for 110/P+/150
NEWMOD.ZIP /b	4	13/11/89	Change Portable's operation mode, font, cursor
TMCHG.ZIP /b	4	23/9/89	Manages a library of Time Manager files for Plus
PPMJOG.ZIP /b	36	06/8/89	Plus and ASCII area code reminder PASCAL P
CRT.ARC /b	105	26/5/89	Plus video driver for PASCAL 5.0
HPINFO.ARC /b	12	09/5/89	Utility to convert Infocom games for 110/Plus
PDL30.ARC /b	17	07/5/89	Updated HPIL.SYS Driver w/ reconfig options
GAUGE.ARC /b	1	15/3/89	Battery 'fuel gauge' program for HP Portable
TMERG1.ARC /b	18	09/3/89	Source for TMERG: Time Manager mail merge
TMERG2.ARC /b	19	09/3/89	Mail Merge program for Time Manager - 110
TMERG3.ARC /b	20	09/3/89	Mail Merge Utility for Time Manager - Plus
TMERG4.ARC /b	17	09/3/89	Docs for TMERG - Time Manager Mail Merge
FONE.ARC /b	13	12/2/89	Command files for Reflections and Plus
FKSTD.ARC /b	1	29/1/89	Utility to initialize f-keys on HP100 and Plus
PP16.ARC /b	2	24/1/89	Replacement INT16 Keyboard BIOS for Plus
BCALCP.ARC /b	44	28/12/88	Ext. Precision RPN calculator for the Plus
BCPSRC.ARC /b	85	28/12/88	Source for BCALCP.ARC, RPN calc for the Plus
SPELL.ARC /b	4	27/11/88	Batch file to load ROM Webster's Spell Checker
PPCAL.ARC /b	9	06/11/88	PASCAL Calendar program for Plus/110
RUNCOM.ARC /b	21	06/11/88	Compiled RUN.COM to run PASCAL CHN files
BOXINT.ARC /b	2	12/10/88	Plus 110+ cursor wordperfect
YAMS.ARC /b	8	17/8/88	Plus sliding bar menus
SNBAK.ARC /b	7	24/7/88	Plus Edisc backup diskcopy
CATBAT.ARC /b	17	18/5/88	110 Plus Portable Paper journal catalog disk
PRINTC.ARC /b	24	09/5/88	PRINTCAL Plus Time Manager Calendar Turb
PPTJ.ARC /b	8	08/5/88	Thinkjet Plus TSR pop-up printer
STUFF.ARC /b	3	13/4/88	110 & Plus keyboard utility
PPHST2.ARC /b	17	03/4/88	History HIST command line edit., C ASM, PPLU
POKRPP.ARC /b	19	29/3/88	Plus Games Poker, Slot Machine
CAL.ARC /b	7	26/3/88	Plus, 110 calendar
PLSLOT.COM /b	10	13/3/88	Plus game fun
POSLOT.COM /b	11	13/3/88	110 portable game fun
KEY.ARC /b	4	12/2/88	Key redefinition Plus SOFTKEY
VU110.EXE /b	12	03/2/88	Portable 110 MACPAINT Windows, Microsoft Paint
PPT2SR.ARC /b	17	20/1/88	Plus PPTERM terminal source code ASM MASM
PPTRM2.ARC /b	6	20/1/88	Plus PPTERM terminal modem XMODEM CRC
CONVER.ARC /b	9	28/11/87	Plus Windows Paint graphics file convert
PlusR.ARC /b	4	14/11/87	Plus ROM WordPerfect
PPHIST.ARC /b	16	27/10/87	Plus TSR MS-DOS command line edit, HIST

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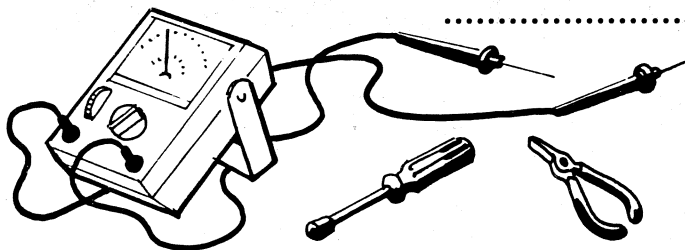
Repairs are as low as \$65. Most upgrades are \$250 or less. And we guarantee our work for a full 90 days.

To set up an appointment for a repair or upgrade, give us a call. Then send in your machine. We'll look at it for just \$25, then give you a firm price on parts and labor. If you decide to go ahead, the \$25 will be applied to the cost of our work.

Here are some typical charges:

- HP110 or Portable Plus screen replacement or upgrade: \$195
- HP110 or Portable Plus keyboard replacement: \$250

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90-day guarantee  
on all repairs  
and upgrades.  
.....



- HP110 or Portable Plus case replacement: \$175
- HP110 or Portable Plus internal modem replacement: \$195
- FastPlus upgrade (faster processor for Portable Plus): \$250
- 256K to 512K upgrade for Portable Plus: \$395
- 128K to 512K upgrade for Portable Plus: \$495
- HP9114 repair: \$65-135
- HP ThinkJet repair: \$65-135

Other repairs depend on our cost of parts and a \$42/hour labor charge. You can expect a range of \$75-\$250 for repairing most HP Portable and HP150 computers and peripherals.

To extend the life of your HP equipment, call our repair service today!  
(800) 373-6114. We guarantee you'll be pleased with the results!

MSCPLU.ARC /b	3	26/10/87	Plus MODEM serial on/off	OFF.COM /b	1	30/4/86	110 Plus Display Off command
MISCPL.ARC /b	2	21/10/87	Plus HP-IL serial port	KALEID.COM /b	11	20/4/86	HP150 graphics games fun kaleidoscope
JETSRC.ARC /b	11	13/9/87	Plus Printer ThinkJet QuietJet LaserJet PaintJet	KALEID.PAS /a	3	20/4/86	PASCAL Kaleidoscope graphics, Games HP150
PATTM.ARC /b	5	13/9/87	110 Portable Time Manager Patch cursor	PRTRM.ARC /b	32	30/3/86	Plus terminal prog., XMODEM transfer Modem
JETCTR.ARC /b	7	10/9/87	Plus LaserJet, QuietJet, ThinkJet pop-up TSR	HPCALC.ARC /b	54	18/3/86	Plus calculator update
PLAY.ARC /b	12	09/9/87	Plus Music Beeper	PPTERM.ARC /b	10	08/3/86	Plus XMODEM file transfer, MH-BBS terminal
MM.COM /b	1	02/9/87	Memomaker patch, backspace, word processing	TMSWAP.ARC /b	3	17/2/86	110 Plus TM time manager swap utility
PRINTC.PAS /a	17	30/8/87	Plus Time Manager calendar PAM.ALM	NAV113.ARC /b	93	25/1/86	110 aircraft navigation flight planning
TurboH.COM /b	3	25/8/87	Plus PASCAL resident	PPROM.ARC /b	33	22/9/85	EPROM programmer firmware development T
PLSCON.PAS /b	3	24/8/87	PASCAL video screen driver, Plus	TMA.ARC /b	18	09/9/85	110 Plus time manager, appointment calendar
ROMDOC.TXT /a	21	16/7/87	EPROM software drawer INTERACT INTEREX	9114PS.DOC /a	2	30/8/85	9114A drive, AC adaptor, battery
APBURN.COM /b	1	14/7/87	Plus ROM EPROM software drawer	HPLOGO.COM /b	3	15/8/85	HP logo demonstration graphics, 110
GSPLUS.COM /b	13	29/6/87	Plus graphics, 123 TSR utility, Screen capture	TERM.HLP /a	5	24/7/85	AdvanceLink, DSNLINK terminal monitor
PORTPR.TXT /a	16	24/6/87	Portable computers	KEYBUF.DOC /a	2	24/2/85	110 keyboard input buffer
EMACPP.ARC /b	41	24/5/87	Plus EMACS text editor	HPIL.DOC /a	19	22/2/85	110 HPIL Toolkit
DNLPP.HLP /a	7	17/4/87	Plus Download help, Datacomm PPTERM XMODEM	HPIL.HLP /a	2	22/2/85	110 HPIL Toolkit
PPTERM.TXT /a	9	17/4/87	PPTERM documentation, XMODEM datacomm	HPIL21.C /a	1	22/2/85	110 HPIL Toolkit
PPTERM.DBG /a	24	16/4/87	PPTERM debug script, datacomm XMODEM	HPIL68.C /a	1	22/2/85	110 HPIL Toolkit
FUEL.COM /b	1	22/3/87	Fuel battery, Plus	HPILB.BIN /b	2	22/2/85	110 HPIL Toolkit
PCRUN.ARC /b	6	20/2/87	Plus IBM INT16 alt. mode screen keyboard com	HPILLB.C /a	16	22/2/85	110 HPIL Toolkit
TCON.ARC /b	91	20/2/87	Plus PASCAL keyboard screen utilities source	HPILLK.C /a	1	22/2/85	110 HPIL Toolkit
PPRLE.COM /b	1	11/1/87	Plus RLE graphics	HPILMN.BIN /b	2	22/2/85	110 HPIL Toolkit monitor buss
EM.ARC /b	51	15/12/86	Plus EMACS	RDFUEL.DOC /a	2	22/2/85	110 battery power level fuel gauge
MF.COM /b	5	15/12/86	Plus Minefield	NONASM.4TH /a	3	09/2/85	110 Forth non-resident assembler
PPDRV.DOC /a	4	08/12/86	Plus Lotus 123 Symphony driver documentation	NEWEDI.SCR /a	13	30/1/85	110 Forth editor
PLUS.SET /b	19	07/12/86	Plus Lotus 123 Symphony driver	NEWEDI.DOC /a	1	27/1/85	110 Forth edit documentation
TJETCT.ARC /b	4	04/12/86	Plus ThinkJet control resident	FLOAD.SCR /a	5	26/1/85	File load utility, 110 Forth
PACK.COM /b	1	02/12/86	110 utility PACK, MS-DOS Edisc	SCRIP.BIN /b	2	21/1/85	110 font editor, Forth typeface
TM.ARC /b	33	02/12/86	110 time management utility	ALPHAB.DOC /a	3	31/12/84	Alpha graphics screen, 110
RING.COM /b	1	30/10/86	Plus resident ring interrupt handler	110.BUG /a	26	29/12/84	110 bugs, unofficial firmware ROM software
INT16.COM /b	1	29/10/86	Plus IBM INT16 compatible interrupt scroll lock	FONT.SCR /a	11	16/12/84	110 Forth font editor
PORTNE.TXT /a	11	26/10/86	110, Plus negotiations cost savings	FORTH.BIN /b	16	16/12/84	110 Forth language
PPTSRC.ARC /b	15	03/9/86	Datacomm PPTERM MASM source MH-BBS	FORTH.DOC /a	29	16/12/84	110 Forth language
PASS.ARC /b	10	26/8/86	110 password protection	FORTH.SCR /a	63	16/12/84	110 Forth language
SLEEP.COM /b	1	19/8/86	Plus Sleep Off ring	FLOAT.SCR /a	12	10/12/84	Floating point math, 110 Forth
KER110.ARC /b	13	09/8/86	Kermit file transfer, 110 1.3 datacom.	HPLOGO.ASM /a	13	09/12/84	Logo demonstration, HP 110 MASM
KERM-P.ARC /b	32	09/8/86	Kermit file transfer, 110 2.29 datacom.	OFF.ASM /a	1	09/12/84	Power Off utility 110 MASM
GRF110.INC /a	13	21/7/86	110 PASCAL graphics routines	READID.ASM /a	1	09/12/84	Read serial number utility subroutine, 110
KAL110.COM /b	15	21/7/86	110 graphics Kaleidoscope	READID.BAS /a	1	09/12/84	Read serial number utility subroutine, 110
KAL110.PAS /a	3	21/7/86	110 Kaleidoscope graphics PASCAL				
SPS110.COM /b	16	21/7/86	110 graphics Spirograph fun games PASCAL				
CIS110.ARC /b	14	11/5/86	110 CIS A protocol, communications source				

(110% continued on page 36.)

# PORTABLE VECTRA VIEWS

*[Vectra Views contains information which specifically pertains to the Portable Vectra CS and Vectra LS/12 Laptop PC. In this column we note the latest developments in Portable Vectra and LS/12 products from Hewlett-Packard, Personalized Software, and other third parties, and include specific tips for Vectra and LS/12 users. Please feel free to contribute on disk or letter to Personalized Software, PO Box 869, Fairfield, IA 52556, or call (515) 472-6330, FAX (515) 472-1879.]*

## Products Specifically Designed for the LS/12 and Portable Vectra CS

**PV** By Richard Hall

**LS/12** This column has for the past two years discussed a number of products that were designed for, or especially well-suited for, the LS/12 or Portable Vectra. This article is an attempt to put all that information in one place, with updated descriptions and pricing. We will summarize what products, peripherals, and add-ons are available for the LS/12 and Vectra CS; where you can get them; and how much they cost.

You can obtain most of these products from Personalized Software. We do this as much as a service to our subscribers as a way to make a profit. Most people prefer one location to purchase their computer needs. Our volume is very low on most of these items and the markup is small. If you know of any other sources for these products, or of any products we should be carrying, please call or write and let us know.

### PRODUCTS FOR THE LS/12

- LS/12** ■ Extra EMS Memory -- 1 to 4 megabytes of EMS memory cards produced by American Cryptonics are available from Personalized Software. The EMS card fits internally in the LS/12 and permits the computer to run memory-intensive programs.
- Datastar 5 modem -- a 2400 bps modem upgradeable to MNP5 error control and data compression protocol, insuring rapid, error-free transmission. Datastar features TOP (true power off) to extend battery life and is compatible with AT and Extended AT command sets.
- HP Internal Modem -- operates in either synchronous or asynchronous modes and provides Bell 103/212A, CCITT V.22 and V.22 bis compatibility. The modem is fully Hayes-compatible, supporting the Hayes Synchronous Interface (HIS) protocol. Data transmission rates of 2400, 1200, or 300 bps.
- LapTape tape backup unit -- LapTape offers 40, 60, and 120 MB of convenient data backup. LapTape connects

directly to the LS/12 external drive port. The software accompanying LapTape provides menu-driven screens to enhance ease of use. Included is a selective file and modified file option which backs up only specified files, or those files that have been changed since the previous backup. A high-speed search feature can locate any file on tape in less than 20 seconds for quick and convenient file restoration. A 20 MB hard disk can be completely archived in less than nine minutes.

- Zenith Numeric Keypad -- This product connects to the keypad port on the right side of the LS/12. This 24-key keypad is an adding machine style numeric entry pad with numbers and arithmetic operation keys, along with useful editing keys such as page up, page down, end, home scroll lock, num loc, ins, del, f11, and f12.
- Zenith Expansion Chassis -- allows you to increase the capabilities of your LS/12 to include networking, video options, additional I/O ports, and expanded EMS memory. The chassis requires installation of a 68-pin connector and is powered by an external AC power source designed to operate at either 115 or 230 VAC. The chassis provides three additional expansion slots for the LS/12, and most XT-compatible expansion cards should work with it. A 68-pin port required for the expansion chassis should be installed by an authorized Zenith dealer. You may also order the Chassis from Personalized Software. If you send us your LS/12, we'll install the port free if you purchase the Chassis from us.
- The Weltec 5.25" floppy drive -- supports both 360K and 1.2MB 5.25" disks. It connects to the LS/12's external drive port and is easily configured for the LS/12.
- HPD1053A 80C287 Math Coprocessor -- a 12 MHz math coprocessor (part # 2-416SS) for the LS/12 or Zenith SupersPort 286. Discontinued, may be difficult to obtain. Call for availability.
- Battery pack -- new replacement pack for the LS/12.
- Recharger -- for the LS/12.

### PRODUCTS AVAILABLE FOR THE PORTABLE VECTRA CS

**PV** New Portable Vectra CS's with a 20 MB hard drive are still available through Personalized Software. In addition, the following used (often never used) Portable Vectra products from HP are usually available from Personalized Software:

- HPD1004A dual serial EMS adapter - fits into Portable Vectra expansion slots. Contains 25 pin female XT-like and 9 pin male AT-like serial ports. Can add 1 or 2 Megabytes of EMS memory to the card. Comes with software to support EMS memory.  
May be difficult to obtain. Call for availability.
- HPD1008A 1 Megabyte EMS memory expansion -- Can add one or two of these units to the HPD10004A dual serial EMS adapter to expand the internal RAM of the Portable Vectra to up to 2.16 Megabytes. The one MB EMS kit includes four 256K chips.



# **EIGHT ways to make your LS/12 Vectra or Portable Vectra CS more productive!**

## **Transfer your files to another PC without hassle!**

Highly rated **LapLink** software offers high-speed file transfer between your Vectra and another IBM PC compatible using **LapLink's** special cable. Versatile (works with parallel and serial ports) and easy to use (simple manual or automatic file tagging).

**LapLink for PV, LS/12 la11ns**

**Retail: \$139; Subscriber: \$119**

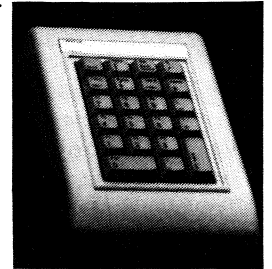


## **Fast numeric entry for your LS/12!**

The **Zenith Numeric Keypad** plugs into the right side of your LS/12. Calculator-style numeric keypad simplifies spreadsheet and database numeric entry tasks.

**Numeric Keypad, LS/12 nu11nh**

**Retail: \$129; Subscriber: \$115**



## **Access any Ethernet network with your Vectra!**

**Xircom Pocket Ethernet Adapter** attaches to your Vectra (or any PC compatible) parallel printer port. It lets you connect to any Ethernet LAN, supporting Novell NetWare versions 2.0a and higher. It's 5 oz: the size of an audiocassette case.

**Ethernet Adapter, LS/12,PV et11nh**

**Retail: \$695; Subscriber: \$629**

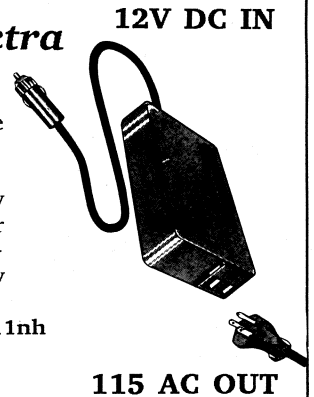


## **Recharge your Vectra while driving!**

Plug your Vectra recharger into the 4.5" x 3.5" x 1.3", 1 lb, **PC100+ StatPower Pocket Power Inverter**. Recharge your Vectra battery by connecting the PC100+ to your car's cigarette lighter. The PC100+ provides instant 115V power from any 12V source.

**StatPower PC100+ PV, LS/12 st11nh**

**Retail: \$179; Subscriber: \$169**

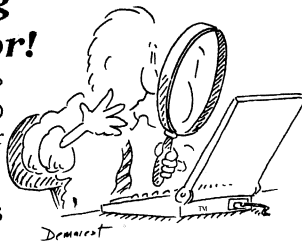


## **No more squinting to find your cursor!**

Why search for a faint underline? Make Vectra cursor BIG and BOLD with **NoSquint** and see the cursor clearly without strain.

**No-Squint PV, LS/12 no11ns**

**Retail:\$39.95;Subscriber:\$37.95**

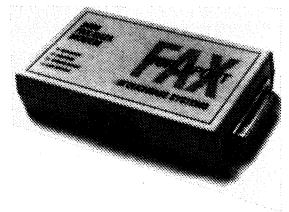


## **Fax your files anywhere, anytime!**

Now you can have both a 9600 bps Group III facsimile and a full-featured 2400 bps modem in one completely portable, pocket-sized unit! Share the **WorldPort 2496** among different PC's, or use it just for your work and travels. Connects to Vectra serial port and can operate from its own battery or from AC power.

**WorldPort 2496 PV,LS/12 wf11nh**

**Retail: \$699; Subscriber: \$599**



## **Back up your LS/12 hard disk files to tape!**

Tallgrass Technologies top-quality tape backup unit backs up LS/12 #20 or 40 Meg hard disk. Connects via LS/12 floppy disk connector in back. HP lab tested and approved.

**LapTape Backup Unit, LS/12 la11nh**

**Retail: \$795; Subscriber: \$695**

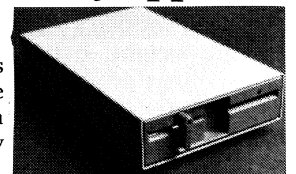


## **Access files from 5.25" floppies using your LS/12**

**Weltech 5.25" disk drive** plugs right into the LS/12 external drive port in back of LS/12. Can read from and write to 360K and 1.2M floppy disks.

**Weltech 5.25" driveLS/12 we11nh**

**Retail: \$349. Subscriber: \$299**



- HPD1003A 2400 Baud Internal modem  
May be difficult to obtain. Call for availability.
- HPD10002A 1200 Baud Internal modem  
May be difficult to obtain. Call for availability.
- HPD1007A Soft carrying case  
May be difficult to obtain. Call for availability.
- HPD1001-60924 Portable Vectra Battery
- HP-IL card -- installs into one of the Vectra's expansion slots and allows you to easily transfer files between the Vectra and any HP-IL device (including your HP-110, Portable Plus, HP-9114 disk drive, or ThinkJet).
- TravelDisk hard drive (and bus extender card) -- a rugged portable hard drive developed originally for military use. Comes with Bus Extender Card that must be installed in one of the Vectra's I/O expansion slots. The TravelDisk is available in varying storage capacities (from 10MB to 250MB) and flexible purchasing options allow you to buy, rent, or lease a TravelDisk, and or upgrade to newer or larger capacity versions.

### PRODUCTS USEFUL AND SUITABLE TO BOTH LS/12 and PORTABLE VECTRA CS

PV  
LS/12

- Weltec Serial Hard Drive -- A battery-powered portable 20MB hard drive that will connect to the RS232 serial port of any PC laptop. (This hard drive should be especially attractive to dual floppy Portable Vectra users.)
- WorldPort 2496 FAX -- A small, battery-powered combination FAX (9600 bps Group II) and MODEM (2400 bps). It has standard RJ11 telephone jacks and acoustic interface, allowing the unit to be used in situations where telephone jacks are not available (phone booths, hotel rooms, third-world countries). An extremely compact and self-contained unit that integrates full data communications features. FAX users can print to any HP LaserJet, or Epson compatible printer.
- Valitek PST-60 Tape backup -- a very easy to use tape backup system that comes with 60MB or 160MB backup tapes. Can be shared among many computers and used by both the LS/12 and Portable Vectra using either the serial or parallel port. The PST does not require the installation of a controller card, which makes it ideal for computers (like the Portable Vectra) that don't have room for one.
- Diconix 150 Plus Printer -- an enhanced version of one of the industry's most popular portable printers. This light-weight, battery-powered inkjet printer produces excellent print quality on standard single-sheet or fan-fold paper. Available in parallel or serial-port models.
- LapLink III -- offers high-speed file transfer between your Vectra and another IBM PC compatible using

### LS/12 & Portable Vectra Products Available From Personalized Software

Product Description/ HP, Zenith Part Number	Retail Price	Subscriber Price
--	-----------------	---------------------

#### LS/12 PRODUCTS

EMS Memory		
1 MB	\$ 295	\$ 285
4 MB	1,195	1,095
Datastar 5 Modem	599	539
Internal Modem/ ZA181-24	449	295
LapTape	795	695
Numeric Keypad	129	115
Expansion Chassis	499	449
Weltec floppy drive	349	299
80C287 math coprocessor/ Z241655	649	575
LS/12 Battery Pack/Z18065	299	269
LS/12 Recharger/ Z150-308	109	109

#### PORTABLE VECTRA PRODUCTS

Vectra with		
20MB harddrive/HPD1009A	\$ 3,895	\$ 1,795
Dual Serial-EMS		
card/HPD10000Aor1004A	220	call
1 MB EMS Memory/HPD1008A	595	295
HP-IL card	245	235
2400 Baud Modem/HPD1003A	695	call
1200 Baud Modem/HPD10002A	450	call
Soft carrying Case/HPD1007A	150	100
Vectra Battery/HPD1001-60924	195	195

Travel Disk and Bus Extender card	New/Used Retail	New/Used Subscriber
TD-10 (10 MB)	\$ 995/650	\$ 945/595
TD-20 (20 MB)	1,095/775	995/725
TD-30 (30 MB)	1,195/900	1,095/835
TD-40 (40 MB)	1,295/1,100	1,195/995
TD-100 (100 MB)	1,895/1,500	1,795/1,395
TD-250 (250 MB)	3,495/call	3,195/call
Extra Vectra bus card	80/na	75
Extra PC bus card	50/na	47
Extra cable	110/na	99

#### SUITABLE FOR LS/12 & VECTRA

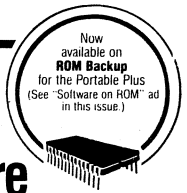
Product Description	Retail Price	Subscriber Price
Weltec Serial Hard Drive	\$ 1,099	\$ 899
WorldPort 2496 FAX	699	599
Valitek Tape backup (60 MB)	1,695	1,495
Diconix Serial Printer	539	415
Diconix Parallel printer	519	399
LapLink III	139.95	119
Squish Plus	99.95	89.95
No Squint	39.95	37.95
EtherNet Adaptor	695	629
StatPower Adaptor	179	169

LapLink's special cable. Works with parallel or serial ports, and is easy to use.

- Squish Plus -- an automatic file compression program that as much as doubles available disk space. No

# Shelp

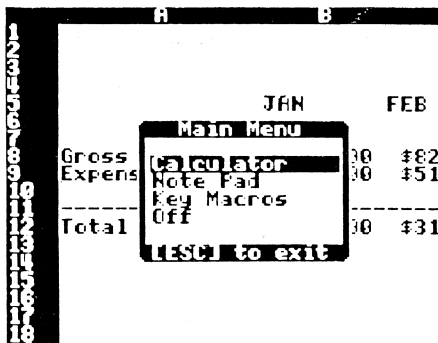
## Instant Access Pop-ups for the Portable Plus: Calculator • notepad • macros • and more



**Recommended by Hewlett-Packard, and used by more than 1,000 of their employees.**

It's a program called **Shelp** (*shell + help*), and it runs on the Portable Plus from within any non-graphics program. Here's all you do:

Press [Ctrl] [Shift] [Extend char] and up pops the Shelp menu, right in the middle of your application (Lotus in this example):



The menu gives you 4 choices: Calculator, Notepad, Key Macros, and Off.

Choose **Calculator** and get a 4-function calculator that works just like a pocket calculator with memory. You can:

- save results in ten different storage registers and retrieve them again with two quick keystrokes

- "paste" results at the cursor location in whatever application you were using when you invoked Shelp.

Choose **Notepad** and a "scratch pad" pops up on your screen. Type whatever you want into it, exit to your application, and then recall the notepad whenever you want.

No more having to scribble notes on paper to remind you of phone numbers, things to do, or bright ideas!

Choose **Key Macros** and you can assign "strips" of up to 31 typewriter characters to any of the 26 letters in the alphabet. This saves you having to type the same phrase over and over again.

*Example:* If you type "United States" a lot, you could assign the entire phrase to the "U" key. Just move the

cursor to "U" in the Keyboard Macros menu and type "United States."

To recall "United States," simply press [Ctrl] [Extend char], then [U]. Presto—"United States" appears at the cursor location in your application!

Choose **Off** and your Portable Plus turns off without having to return to P.A.M., and without having to save your application file. When you turn your computer back on, you'll be in the same place in the same application, with no data lost.

All the capabilities of IBM-PC programs like Borland's SideKick and SuperKey? Certainly not, but Shelp's the only such program for the Portable Plus. It's a clean, easy-to-use, and highly useful helper you'll want at your fingertips always.

Shelp runs on the Portable Plus only. It works with Time-Manager, MemoMaker, Reflection 1, Lotus, and any other non-graphics program. (Shelp does not run with MS Word.)

Shelp was written by Randy Salo, the former HP engineer who authored MemoMaker on the original HP Portable.

PRODUCT NO. SH11NS

**Shelp .....\$55 (\$49.95 for Portable Paper subscribers)**

**60-day no-risk trial:** If, after 60 days you are dissatisfied with this product for any reason, you may return it for a full refund. **To order,** use the postage-paid form at the back of this issue, or send check or credit card number to: Personalized Software, P.O. Box 869, Fairfield, IA 52556 515/472-6330

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special procedures are involved to compress files. Squish Plus does it automatically.

- **No-Squint** -- Turns hard-to-read cursors into big, block cursors that stand out on the screen.
- **EtherNet Adaptor** -- connects to the parallel printer port of the LS/12 or Portable Vectra and allows you to connect to an Ethernet or IEEE 802.3 LAN. The Adaptor supports Novell NetWare versions 2.0a and higher.
- **PC100+ StatPower** -- this pocket adaptor lets you recharge your LS/12 or Portable Vectra battery from your car's 12 volt battery. The PC100+ provides instant 115V power from any 12 volt source. ■

the HP Corporate Price List on February 1, 1990. The numeric coprocessor (D1053A) and the 1 MB Memory Card (D1054A) were also discontinued on February 1. All other LS/12 accessories will remain on the CPL for a minimum of three months after LS/12 discontinuance.

"No follow-up product to the LS/12 is planned at this time. Hewlett-Packard has chosen instead to focus resources on developing mainstream and high-end desktop and desktide personal computers. Customers will be able to source laptops from a variety of vendors which manufacture industry-compatible portable computers.

"The LS/12 will enter a 5 year support life after February 1, 1989."

## LS/12 Removed from HP Price List

LS/12

This is the official notice from Hewlett-Packard about the LS/12:

"The LS/12 with 40MB hard drive (HP part # D1044A) and all remaining options of the LS/12 with 20MB hard drive (D1024A) were discontinued and removed from

HP Product #	Description	Discontinuance Date
D1024A	20MB LS/12	February 1, 1990
D1044A	40MB LS/12	February 1, 1990
D1052A	U.S. Modem	To be determined
D1053A	Numeric coprocessor	February 1, 1990
D1054A	1 MB Memory Card	February 1, 1990
D1057A	Battery	To be determined
D1058A	Battery Charger	To be determined

# NEWS FROM



## Personalized Software INC.

*Products that make HP Portables smarter*

P.O. Box 869, Fairfield, Iowa 52556 515 472-6330

by Hal Goldstein

### Burn Your Own 128K EPROMs!

**P+** We have been working on this project for over a year and, to my great relief, it finally came together today just in time to make The Portable Paper. Any Portable Plus user will be able to burn 128K byte ROMs directly from his Portable Plus. The HP Portable Plus ROM drawer has room for 12 ROMs. That means there is now room in the drawer for 12 times 128K or 1536K of data or programs.

The project really didn't gain any momentum until Ron Chase, a former HP technician, joined our Personalized Software staff. Ron was recently hired to repair your HP Portable or HP150 equipment. However, Ron has been working feverishly this past month to finish this project.

What we have put together is a collection of hardware, software, and instructions that will allow even novice users to burn their own ROMs. That means that Portable Plus users can make permanent (as if built into the Portable Plus) most any piece of software or file that works on the Portable Plus.

#### BACKGROUND--ROMS, PROMS, AND EPROMS

"Burning" (or permanently copying) files onto a ROM is similar to copying files onto a floppy disk. The big difference is that once a file is "burned" onto the ROM, it cannot be changed. (This is not the case with a floppy disk, unless you push down the write-protect tab on the back of a floppy disk.) Floppy disks are accessed through the C drive of the Portable Plus. Files on installed ROMs appear on the B drive.

A ROM BURNER is used to burn a copy (or "image") of one or more Portable Plus program or data files onto the ROM (also called PROM for Programmable Read Only Memory).

An EPROM (Erasable Programmable Read Only Memory) is a special type of ROM that can be erased (usually with Ultraviolet light) and reprogrammed. In this article we will refer to all EPROMs, PROMs, and ROMs generically as ROMs unless the context demands otherwise.

Commercially available ROMs are described in part by the number of connecting pins they have, and their storage capacity in bits. (Remember that there are 8 bits to a byte. A one megabit ROM, with slightly over 1,000,000 bits, stores 128K bytes of data, and is referred to as a "128K ROM.") The Portable Plus ROM drawer requires 28-pin

ROMs. Unfortunately most higher-capacity ROMs come in 32-pin versions. Until this announcement, commercial 128K ROMs have come in a 32 pin package and did not fit into a Portable Plus ROM drawer. In this article we will be discussing 64K and 128K byte ROMs.

Previously, burning ROMs for the Portable Plus was something akin to a black art. The least expensive way to go was to purchase a ROM burner that connected to an IBM PC compatible via a card placed in one of the PC's expansion slots. Software available in the HP forum of CompuServe (and its somewhat unclear and rather technical documentation) made it possible to burn commercially available 64K byte 27C512, 12.5 volt EPROMs for use in the Portable Plus.

Despite rumors and even announcements to the effect, no 128K byte user EPROM was ever manufactured in the 28-pin package required by the Portable Plus ROM drawer. 128K ROMs could be burned in Japan if you provided the image, and if you ordered in quantities of 2000 or more. And this took from two to four months and sometimes longer. The HP 128K ROMs for Lotus and ECM, and Personalized Software 128K ROMs for Webster's and SuperROM were manufactured this way in Japan.

#### WHAT WE DID

Our efforts took us in two directions. First we had to figure out how to manufacture a 128K EPROM. Then we had to figure out how to burn those ROMs directly from the Portable Plus.

- The ROM -- We had been working with an outside engineer on creating the 128K EPROM. But his solution was expensive, hard to install, and didn't work properly. Ron Chase, our former HP technician, started from scratch and redesigned the product. He found a commercially available 128K byte, 32-pin EPROM that could be surface mounted onto a 28-pin adapter that we would build to fit in a Portable Plus ROM socket.

It was important to me that Ron find a reprogrammable chip rather than a one-time only programmable ROM. Our experience with creating ROM backup packages was that it sometimes takes more than one time to get the ROM just the way we want. We assumed our customers might have the same experience. Fortunately, Ron located both an erasable and a less expensive one-time-programmable ROM that fit our specifications. Users who want to burn multiple copies of the same ROM can order one-time-only ROMs, rather than EPROMs, to reduce their price.

- The ROM Burner -- The next step was to locate a ROM burner that could be used with the Portable Plus. Ron successfully located a reasonably priced serial ROM burner. This burner attaches to the Portable Plus via a serial cable. Ron worked with the manufacturer, sending him a Portable Plus and a prototype of our ROM. The manufacturer created a special ROM identification module that "teaches" the ROM burner how to work with our special 128K ROM. Functionally, this ROM burner with ID module burns our 32-pin 128K byte EPROM so that it can be read in the Portable Plus

# Portable Fun!



Chess



BRIDGE



YAHTZEE



Go-Moku

**11 great games for your Portable Plus**  
**—only \$69.95! (subscriber price)**

...and 7 more!

GamesPlus™ turns your Portable Plus into a portable game center packed with fun for the entire family.

Many people will buy GamesPlus for the Chess or Bridge games alone. But GamesPlus is a great collection even if you don't play Chess or Bridge.

Other games in the collection—like Yahtzee, Othello, and Go-Moku—are easy to learn, challenging, and don't take long to play. So even if you only use one or two of the games, GamesPlus is well worth having!

When you're traveling, GamesPlus is a fun way to occupy your waiting time. If you have

children, GamesPlus makes a wonderful present.

At only \$69.95 for subscribers, GamesPlus is probably the best game value in the computer industry today—and it's the only games package that runs on the Portable Plus.

Have fun! Order GamesPlus at our risk today.

<b>GamesPlus (11 games on disk)</b> .....	<b>\$99.95</b>
<b>Portable Paper subscriber price</b> .....	<b>\$69.95</b>
PRODUCT NO. GA11NS	
<b>GamesPlus ROM Backup (11 games on disk plus 6 games on ROM)</b> .....	<b>\$205.00</b>
<b>Portable Paper subscriber price</b> .....	<b>\$175.00</b>
PRODUCT NO. GA11NK	
<b>GamesPlus ROM (if previously purchased GamesPlus disk)</b> .....	<b>\$105.00</b>
PRODUCT NO. GA11NR	

## GamesPlus™ — 11 Great Games Customized to the Portable Plus

Exclusively from Personalized Software

### Bridge

Using a modified Goren bidding system, our Bridge program lets you practice bidding and playing without having to round up four other people. Whether you're a beginner or an experienced player, Bridge will help you hone your skills for your next get-together!

### Chess

Our Chess program doesn't play on the Grand Master level, but it will give most players a run for their money. You can set total game time, average response time per move, level of play, and many other parameters. Practice openings, end-game strategies, and more. A great way to improve your game!

### Fastermind

A code-breaking game. The computer gives you a number code (for example, 4 digits long, each digit can be 0-6). To break the code, you take a series of guesses, while the computer gives you clues as to which digits are correct. You select the level of difficulty for each game.

### Foxhound

A strategic chase game. Three hounds try to corner a fox in 20 moves or less. The fox gets wlier as play proceeds!

### Go-Moku

In this Japanese game of strategy, players take turns placing "stones" on a 19x19 grid game board. First player to get 5 stones in a row (horizontal, vertical, or diagonal) wins the game. Simple but challenging!

### HP-Amateur

A reverse guessing game. The computer asks you a series of questions, then "guesses"

what you're thinking about. If you wish, it even tells you its reasoning. Instructions are included for adding your own "rules file" to the two provided.

### Landmine

In Landmine, you navigate a mine field trying to avoid the hidden mines. Millions of hours have been spent playing the paper version of this game in high schools across America!

### Memory

The old "Concentration" game that Hugh Downs hosted 25 years ago on TV. Find matching pairs of items among a set of "cards" whose faces are hidden.

### Othello

To outflank your opponent, place one of your pieces at either end of a row of his pieces. Then his pieces become yours. When all spaces on the 8x8 grid are filled, the player occupying the most spaces wins.

### Tic-Tac-Toe

The ever-popular game of X's and O's. When you play against the computer, your opponent never gets bored!

### Yahtzee

A modern classic that's a great combination of chance and strategy. Players take turns rolling five "dice," using specific combinations of the dice to try to maximize their scores. The computer keeps track of scores and generates the roll of the dice.

### GAMESPLUS ON ROM BACKUP

Our ROM Backup version of GamesPlus includes all 11 games on disk plus 6 games compressed onto two 64K ROMs (Chess, Fastermind, Go-Moku, Othello, and Yahtzee, plus special free bonus:

**Tiger Fox, an engrossing maze/chase game.)**

as a 1 Megabit masked formatted ROM -- the same format as the HP Lotus ROM or our Webster ROM.

**P+** Since these ROMs we developed are erasable via ultraviolet light, a separate Ultraviolet Eraser unit will be included whenever we sell a ROM burning kit.

The ROM burner itself contains three sockets. The right socket expects an "identification module" that tells it what kind of ROM is to be burned. We will supply two identification modules with the units we sell, one for 64K EPROMs and one for 128K EPROMs. You can use this same ROM burner to burn other families of EPROMs by getting the appropriate (and relatively inexpensive) identification module. Call us if you are interested in other modules when you purchase your unit.

The left socket accepts the ROM chip that you are burning. Connect the ROM burner to your Portable Plus or IBM compatible via the serial port. Then use software supplied with our ROM burning kit to copy the information from your Plus's electronic or floppy disk to the ROM.

Finally, you can use the ROM burner as a stand-alone unit if you want to make multiple copies of your software on ROM. Place in the center socket a ROM that you know already works properly. Put the blank ROM in the left socket and make your copy.

■ **The Software** -- Several pieces of software are included with the package. First we will include HP software to burn the ROM from the Portable Plus. Clear instruc-

tions, examples, and batch files will make its use straightforward.

Secondly, we include the ROM burner manufacturer's software if you want to burn your ROMs from an IBM compatible.

Thirdly, we will include useful utilities to facilitate creating ROMs and to maximize the use of your ROM drawer. The most important and powerful of these utilities, LZEXE and SCRNCH are described in David Hughes "On My Soap Box" column and in Ed Keefe's "Looking Glass". See also my comments on the limitations of these programs in the "110% Column". These utilities, SCRNCH and LZEXE, shrink most program (EXE and COM) files 25 to 70%. That means that you can fit more programs on your ROM chips.

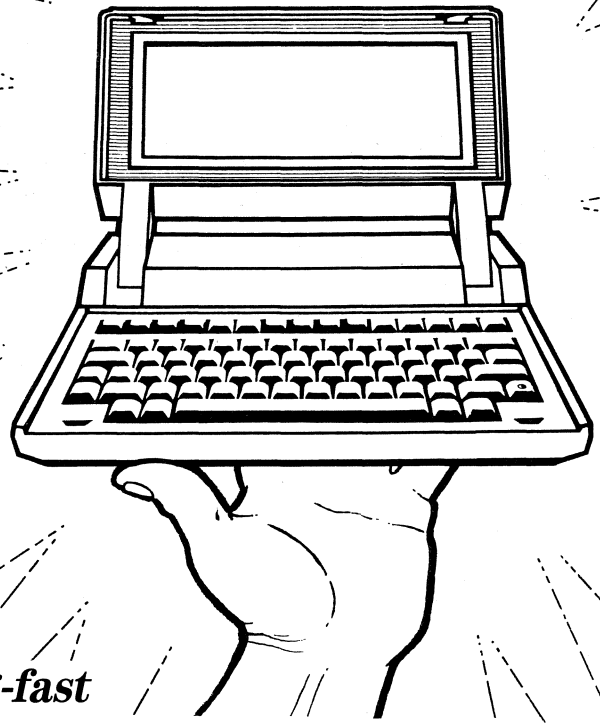
■ **The Manual** -- We are now working on the manual that will provide a step-by-step tutorial on how to burn an EPROM. It will be geared to the non-technical user ... we want every Portable Plus owner to be able to use one of these ROM burning kits.

The Manual will also document how to automatically modify your PAM menu screen so any newly-installed software on EPROM shows up.

The manual will also contain tips and tricks for putting software on ROM that will stretch the limitations of the Portable Plus described in the next section.

(ROM Burner article continued on page 24.)

# MAXIMUM POWER FOR YOUR PORTABLE PLUS



*Easy-to-use, lightning-fast ROM chips save valuable Portable Plus memory and eliminate the need for a disk drive.*

The most powerful and unique feature of your Portable Plus is that it lets you store programs on ROM (Read-Only Memory) chips for instant access.

Almost all other portable computers require a disk drive in order to function. A disk drive—even a portable one—is a bulky piece of equipment, easily breakable, and slow in loading programs.

By contrast, a ROM chip weighs next to nothing, is virtually indestructible, and lets you load programs instantly. (Programs on ROM chips don't take up any space on your Edisc.)

All of which means that your 9-pound Portable Plus is **the fastest, most portable, and most reliable computer you can own**—provided, of course, you take full advantage of its ROM technology.

## YOUR SOFTWARE DRAWER WAS MEANT TO BE FULL

The engineers at Hewlett-Packard designed the Portable Plus so it could accommodate an optional "software drawer" containing 12 ROM sockets. Clearly, their intention was that those sockets be filled with useful programs.

But if you're like most Portable Plus users, you probably are using

just a few of the sockets for ROM-based programs like Lotus 1-2-3 or MemoMaker.

That's fine as far as it goes, but if you aren't using *all* the ROM sockets—or if you have to carry around an HP9114 disk drive wherever you go—*then you are not using your Portable Plus to full advantage.*

To start using the *full* potential of your Portable Plus, look over the chart at the far right. It contains more than 50 programs and utilities available on ROM chips from Personalized Software.

Taken together, these ROMs cover *every application you're likely to need*—from word processing to spreadsheets to data

communications, graphics, programming languages, and more. Which means once you install these ROMs, you'll have everything you need right inside your Portable Plus. *You'll never have to carry a disk drive again.*

We invite you to browse through the chart, read the information at the right, and then order one or more ROMs today. You'll find them to be fast, reliable, and an incredible boost to your productivity.

Whatever your reason: to free up valuable memory space... to eliminate the need for an external disk drive... or just for the convenience of lightning-fast program loading, *fill your software drawer with ROMs* and you'll turn your Portable Plus into the powerhouse its designers intended it to be.

With our exclusive Double Guarantee, the risk is all ours. Why not order right now?

P.S. If you have questions about any of the ROMs, give us a call. Brian or David will be happy to make some recommendations as to which ROMs might best meet your needs for word processing, spreadsheets, or whatever applications you're interested in.

## EASY TO INSTALL

We supply clear instructions and diagrams with every ROM order. If you prefer, send us your software drawer and we will install your ROMs for you—and test them—at no charge.

To remove your software drawer, first back up your A drive (so you won't lose your data), then use an ordinary screwdriver to remove the two outside screws on the drawer.

You won't be able to use your Portable Plus without the software drawer, so we recommend you call us first to make sure the ROMs you want are in stock, and to set an appointment for installation.

That way, we can install and test your new ROMs the day we receive your software drawer, then ship your drawer back that same evening. Return shipping within the Continental U.S. via UPS Second-Day Air is free for all orders over \$200. Please add \$15 to your order if you want overnight return shipping.

(In most cases, if you set an appointment in advance and use overnight shipping both ways, you'll only be without your software drawer for less than two business days. We'll ship the manuals and other materials in advance by surface carrier so you'll have them by the time you receive back your software drawer.)

## HOW TO ORDER ROMS

To order, use the postage-paid order form in the center of this issue. For even faster service—or if you have questions about any of our ROMs—give us a call.

## OUR EXCLUSIVE DOUBLE GUARANTEE ON ROMS

### 60-DAY GUARANTEE OF SATISFACTION

If, within 60 days, you are dissatisfied with a ROM product for any reason, you may return it for a full refund.

### 2-YEAR GUARANTEE AGAINST DEFECTS:

If a ROM proves defective at any time within 2 years, we will replace it at no charge.



## IMPORTANT INFORMATION ABOUT OUR ROMS

We offer two kinds of ROM chips. One kind we produce ourselves; these are offered as part of our "ROM Backup Packages" (see below). The other kind are manufactured by Hewlett-Packard; we call these simply "HP ROMs."

### ROM Backup Packages

A ROM Backup Package includes both the disk version of a program and the ROM version—plus the standard User's Manual and additional instructions for installing and using the ROM. (In the chart, prices of products marked "PS" are for entire ROM Backup Package.)

According to the agreements we have with the original software vendors, our ROM version is considered a backup copy of the disk version. Unless you already own the disk version, we cannot sell you the ROM Backup by itself.

### Please note:

1. If you purchased the disk version of a program from us, we have that in our records. If you purchased the disk version elsewhere, you will need to show us proof of purchase before we can sell you just the ROM Backup.

2. Prices for ROM Backups alone are as follows:

As-Easy-As	\$125.
Best of DOS Tools	\$129.
The Editor	95.
GamesPlus	105
HPDuette	95.
HPrint	95.
Shelp	55.
SideWinder	55.
Shelp + SideWinder	95.
Sketch	95.
Squish Plus	135.
SuperROM	49.
TermPlus	95.
Turbo Pascal 3	95.
Typing Whiz	95.
Webster's Speller	179.
WordPerfect	295.

3. It is important that you read and adhere to the licensing agreement that comes with the disk version of any software you buy, because the same agreement applies to the corresponding ROM Backup. In most cases, this means you can use only one version of the software at a time on only one computer system at a time. Remember, the ROM is a *backup* copy of the software, not an independent second copy.

### HP ROMs

The HP ROMs that we sell do not include (or require) the corresponding disk versions. They are the same ROMs that HP sells, except ours are used—which turns out to be *better* than buying them new. Here's why:

Unlike other used products you can buy, there are no moving parts on a ROM, and nothing that can wear out. Because of this, our two-year guarantee against defects applies to used HP ROMs as well as to our own ROM Backups. (Two years is twice the guarantee against defects that Hewlett-Packard offers.)

Our used HP ROMs are also covered by our unique 60-day guarantee of satisfaction.

Best of all, our used HP ROMs are priced as much as 50% below retail. Look at the chart at the right and compare! (In the chart, "Retail price" of HP ROMs is HP's price new. "Subscriber price" is our price used.)

## SOFTWARE AVAILABLE ON ROM

For product details, see individual ads elsewhere in this issue, in our catalog, or refer to articles in past issues. In this chart, "Type" refers to either HP (used HP ROM) or PS (Personalized Software ROM Backup Package - price includes both ROM and disk versions). **CALL FOR AVAILABILITY OF USED HP ROMS.**

Product	Part Number	Retail Price	Subscriber Price	Type	No. of chips	Notes
<b>WORD PROCESSORS</b>						
WordPerfect 5	WD11NK	\$919	\$595	PS	6	384K of files includes PlusPerfect, main WP program, help files, printer drivers, etc. Does not include required 300K wp.fil file, spelling checker, or thesaurus.
The Editor II	ED12NK	195	175	PS	1	The Editor version 1 is available as part of our SuperROM chip (see "Combined ROMs," below).
MemoMaker	-	-	-	HP	-	Comes on same chip as Time Manager (see "Combined ROMs" below.)
MSWord	MS20UR	394	199	HP	1	
MultiMate	MM20UR	520	295	HP	1	
<b>WORD PROCESSING UTILITIES</b>						
Format110	-	-	-	PS	-	Comes as part of SuperROM (see "Combined ROMs")
FormatPlus	FP13NK	175	165	PS	1	
HPrint	HP12NK	175	171	PS	1	
Mini PrinterTalk	-	-	-	PS	-	Comes as part of SuperROM (see "Combined ROMs")
Webster Speller	WB13NK	259	249	PS	2	
<b>SPREADSHEETS AND UTILITIES</b>						
Lotus 123,1A	LT12UR	495	249	HP	2	
Lotus 123,2.01	LT15UR	625	395 <sup>2</sup>	HP	3	3rd ROM containing help doesn't have to be installed.
New Lotus 123,2.01	LT11HR	625	499 <sup>2</sup>	HP	3	Pricing of NEW HP ROM if used ROM not available.
As-Easy-As	AS11NK	215	195	HP	2	
SideWinder	SW12NK	135	125	PS	1	Also available on a ROM with Shelp, and on our SuperROM chip (see "Combined ROMs" below).
<b>DATABASE PROGRAMS</b>						
Exec Card Manager	EC11UR	395	225	HP	1	(Lotus 1-2-3 can also be used as a database.)
<b>COMMUNICATIONS</b>						
PC2622	PC13UR	395	239	HP	1	VT100 and HP Terminal emulator.
Reflection	RF11UR	525	295	HP	1	Minor upgrade of PC2622
TermPlus	TE13NK	195	175	PS	1	Includes FormlBM, Jetctrl, and other great utilities.
<b>PRODUCTIVITY BOOSTERS / GAMES</b>						
Best of DOS Tools	DT12NK	179	169	PS	2	Selected utilities from DOS Tools <sup>1</sup>
FilePlus	FE14NK	165	155	PS	1	
GamesPlus	GA11NK	205	175	PS	2	Chess, Go-Moku, TigerFox, FastMind, Othello, Yhatzee
HP Calculator	CL11NK	95	95	PS	1	From our 1987 Subscriber Disk
HP Duette	DU13NK	195	185	PS	1	Contains Portable Plus half of software
Shelp	SH12NK	110	105	PS	1	Includes note extraction program. Shelp also available on a ROM with SideWinder, and as part of SuperROM chip (see "Combined ROMs" below).
Time Manager				HP		Comes on same ROM as MemoMaker (see "combined ROMs" below).
Typing Whiz	TW12NK	145	135	PS	1	
Squish Plus	SQ11NK	264	235	PS	2	
<b>GRAPHICS</b>						
Sketch	SK12NK	175	171	PS	1	(Lotus 1-2-3 can also be used for graphics.)
<b>PROGRAMMING LANGUAGES</b>						
MSBasic	MS21UR	331	165	HP	1	This is not GWBASIC.
<b>COMBINED ROMs</b>						
MemoMaker/TimeMgr	MM21UR	245	119	HP	1	
Shelp,SideWinder	SH13NK	235	215	PS	1	Also includes SideWinder enhancement utility.
SuperROM (5 programs on one chip):The Editor, Format110, Mini PrinterTalk, Shelp, Sidewinder	SU11NK	474	299	PS	1	Mini PrinterTalk is the abbreviated version included on the PrinterTalk disk; it is functionally equivalent to Printertalk for most applications. Shelp and SideWinder are the same versions as on the individual ROMs described above.
<b>BUNDLES</b>						
Editor Pack +	FM17NK	823	599	PS	5	(Editor II, Webster, FormatPlus, FilePlus)
Editor Pack	FM16NK	658	499	PS	4	(Editor II, Webster, FormatPlus)

<sup>1</sup>Utilities included in the Best of DOS Tools ROM backup Package are as follows. For program details, see catalog.  
PACK DUMP TY CYPHER RENDIR WHEREIS TEE SDL FDATE LABEL DIRS TRANSLIT  
CLEAN DIRALL ARCE MOVE OFF CHANGE ARCS20 MOVEALL TRIM BEEP SQPC SM  
VDL TMA TJETA FCOPY ASK PRNCONF WAIT FGREP XCOPY FDUMP COPYNEW  
Note: ARCS20 is shareware; the author normally requests a \$35 contribution. However, we've already paid your user fee.

<sup>2</sup>IMPORTANT: All HP ROM prices given in this chart (unless otherwise stated) are for used ROMs. Used HP ROMs (especially Lotus 2.01) are sometimes not in stock. Call to verify availability of used HP ROMs and pricing on new HP ROMs if used ROMs unavailable.

# COMPLETE HP110, PORTABLE PLUS PRICE LIST

Product	Part Num.	Retail Price	Sub. Price	With Purchase <sup>0</sup>
<sup>0</sup> Items in this column are discounted further with a purchase of an HP110 or a like-new or used Portable Plus.				

## HP110, PORTABLE PLUS COMPUTERS

COMPUTERS				
Like-new 512K P.Plus <sup>1</sup>	PP36UC	\$2795	\$995	
Used 512K P. Plus	PP16UC	2795	795	
Used 128K P. Plus	PP12UC	2590	395	
Used HP110 Portable	PQ11UC	3000	495	
Like-new German Plus <sup>1</sup>	PP37UC	2795	995	
German localiz. ROM	GE31UR	150	99	(50)
Like-new Swiss/Fr. Plus <sup>1</sup>	PP34UC	2795	995	
French localiz. ROM	FR31UR	150	99	(50)
Like-new Swedish Plus <sup>1</sup>	PP40UC	2795	995	
Like-new English Plus <sup>1</sup>	PP31UC	2795	995	
Like-new Italian Plus <sup>1</sup>	PP38UC	2795	995	
Italian localiz. ROM	IT31UR	150	99	(50)
<sup>1</sup> All Like-new Portable Pluses come in original packaging with new battery, new manual, and our 1 year guarantee.				

## SPECIAL HP110, PORTABLE PLUS BUNDLES

HP110, ThinkJet, HP9114	PP40UX	\$4300	\$ 795	
Like-new RAM Special <sup>2</sup>	BU11UX	3816	1295	
Used RAM Special <sup>2</sup>	BU12UX	3816	1095	
Like-new ROM Special <sup>3</sup>	BU13UX	4450	1595	
Used ROM Special <sup>3</sup>	BU14UX	4450	1395	
Like-new Terminal Spec. <sup>4</sup>	BU15UX	4360	1395	
Used Terminal Special <sup>4</sup>	BU16UX	4360	1195	
256K Terminal Special <sup>4</sup>	BU17UX	4591	845	
<sup>2</sup> RAM SPECIAL: 512K Port. Plus, 128K RAM drawer, Shelp, Editor II, Websters, FormatPlus, FilePlus, As-Easy-As, GamesPlus				
<sup>3</sup> ROM SPECIAL: 512K Portable Plus, 128K RAM drawer, ROM drawer, GamesPlus, and ROMs:				
Editor II, Websters, FormatPlus, FilePlus, Shelp, As-Easy-As				
<sup>4</sup> TERMINAL SPECIAL: 256K or 512K Portable Plus, 1200B int. modem, Reflection or PC2622, MemoMaker, Time Manager				

## PERIPHERALS

MODEMS				
Used 1200 B. Internal	BM11UC	\$600	\$250	(167)
WorldPort Modem 1200	WM11NH	199	179	
WorldPort Modem 2400	WM12NH	359	319	(295)
WorldPort M. 2400/MNP	WM13NH	499	425	
WorldPort serial cable	WM14NM	30	20	
WP 1200 Upgrade kit	WM13NH	199	179	
WP Acoustic coupler	WM16NH	79	79	
HP92205D Acoust. cpler	AC11NC	195	135	

## PRINTERS, PLOTTER (Used)

HP-IL ThinkJet Printer	TJ11UC	\$ 495	\$ 199	(179)
Serial ThinkJet Printer	TJ14UC	495	295	
DeskJet Printer, cable	DJ11UC	837	425	(399)
HP-IL 7470A Plotter	PL11UM	1095	595	
DeskJet Plus	DJ12UC	995	CALL	
PaintJet	PA12UC	1395	CALL	
LaserJet 500 Plus	LA13UC	4200	CALL	
LaserJet IID	LA12UC	3795	CALL	

## DISK DRIVES (used)

HP9114A Disk Drive	DD11UC	\$ 795	\$ 199	(179)
HP9114B Disk Drive	DD12UC	795	249	(199)
15 Meg Hard Drive	HD11UC	2700	995	
(with HP-IB/HP-IL Interface, HPIB, HPIL cables)				

## MEMORY, SOFTWARE DRAWERS (Used, P.Plus)

1 Meg HP RAM Drawer	MM11NC	\$1275	\$ 995	
384K HP RAM Drawer	MM12UC	982	295	
256K HP RAM Drawer	MM19UC	709	225	(199)
128K HP RAM Drawer	MM13UC	436	150	(99)
128K HP Memory Card	MM14UC	273	125	(99)
HP ROM Software Draw.	SW11UR	195	99	(79)

## ROM BURNING (Portable Plus)

ROM Burning kit	EP10NH	\$695	\$595	(495)
(ROM burner & eraser, cable, 2 128K EPROMs, software, manual)				
128K byte EPROM	EP11NR	69	59	(49)
Four 128K byte EPROMs	EP12NX	276	199	(179)
128K PROM (can't erase)	EP18NR	64	54	(44)
Four 128K PROMs (" ")	EP19NX	256	179	(159)
64K 27C512, EPROM	EP13NR	25	22	(19)
ROM burning software	EP14NS	250	195	
Custom 128K burning	EP15NE	150	135	
Custom burning consult.	EP16NE		75 per hour	
2 for 1 trade	EP17NE	69	59	
(send in 2 Pers. Sw. 64K ROMs, we'll make into 1, 128K ROM)				

## INTERFACE CARDS (used)

HP-IL Card For IBM PC	IL11UC	\$195	\$119	(99)
New HP-IL Card For PC	HP17HM	195	159	
P.Plus Video Interface	V114UC	435	195	
P.Plus V.Intfnc+Monitor	VM12UM	750	275	
Composite monitor	VM11UC	325	150	
HPIL/HPIB Interface	IL13UC	395	235	
HPIL/Serial Interface	IL12UC	295	179	

## INPUT DEVICES

Log.Mouse P.Plus System	MS15NM	\$219	\$179	
P.Plus Mouse Sftwre	MS11NS	70	60	
P.Plus Mouse Cable	MS13NM	30	20	
Numeric Keypad, P.Plus	TS11NM	139	135	

## THE PORTABLE PAPER

(Subscribers Disks Only Available With Subscriptions)				
1990 Subscription & Disk	PPN1PS	\$55.00	(Free)	
All 1986-90 issues and disks	PL11PK	154.00		
All 1986-89 issues and disks	PL14PB	99.00		
Individual back issue	PP99PB	9.20		
PP Binder Vol.5	PB16NM	7.00		
PP Binder Vol.1-5	PB15NM	29.00		

## SOFTWARE ON ROM (PORTABLE PLUS)

If the product number ends with "UR", it is a used HP ROM. If it ends with "NK", it is a new Personalized Software disk plus ROM backup.

Product	Part Num.	Retail Price	Sub Price	W/PlusBackup Purchase Price
Word Processors				
WordPerfect 5	WD11NK	\$940	\$595	(495) 295*
The Editor II	ED12NK	195	175	(99) 95*
MMkr/TmMgr	MM21UR	245	119	(99)
MSWord	MS20UR	394	199	
MultiMate	MM20UR	520	295	(199)
Editor Pack +	FM17NK	823	599	
(Editor II, Webster, FormatPlus, FilePlus)				
Editor Pack	FM16NK	658	499	
(Editor II, Webster, FormatPlus)				
Word Processing Utilities				
FormatPlus	FP13NK	\$175	\$165	(99) 95*
HPrint	HP12NK	175	171	95
Wbster Speller	WB13NK	259	249	(199) 179*
Spreadsheets and Database				
Lotus 123,1A	LT14UR	\$495	\$249	(199)
Lotus 123,2.01	LT15UR	625	395	
New Lotus, 2.01	LT11HR	625	499	
As-Easy-As	AS11NK	215	195	(159) 115*
Exec Crd Mgr	EC11UR	395	225	(199)
SideWinder	SW12NK	135	125	(99)
Communications				
Advanced Mail	AD12UR	\$295	\$150	(99)
PC2622	PC13UR	395	239	(99)
Reflection	RF11UR	525	295	(139)
TermPlus	TE13NK	195	175	(99) 95*
Productivity Boosters / Games				
DOS Tools	DT12NK	\$179	\$169	129
FilePlus	FE14NK	165	155	(99) 95*
GamesPlus	GA11NK	205	175	(159) 105*
HP Calculator	CL11NK	95	95	
HP Duette	DU13NK	195	185	(139) 95*
Shelp	SH12NK	110	105	55*
Squish Plus	SQ11NK	264	235	(199) 135*
Typing Whiz	TW12NK	145	135	(99) 95*
Graphics				
Sketch	SK12NK	\$175	\$171	95*
Programming Languages				
MSBasic	MS21UR	\$331	\$165	(99)
Turbo Pascal 3	TP13NK	No longer published		95*
Combined ROMs				
Shelp,SdWndr	SH13NK	\$235	\$215	(139) 95*
SuperROM	SU11NK	474	299	(199) 49*
* You must own the disk version of the product in order to use prices in the "Backup Price" column.				

## SOFTWARE ON DISK

Word Processors				
The Editor II .	ED11NS	\$ 99.95	\$ 79.95	(49)
Editor Pack	FM16NX	259.00	195.00	
(Editor II, FormatPlus, Webster Speller)				
The Editor II/Formatter	ED13NX	119.95	99.95	
VI (Unix-like editor)	VI11NS	195.00	169.00	
WordPerfect 4.2 P. Plus	WD18NS	435.00	339.00	
WordPerfect 5.0 P. Plus	WD17NS	645.00	395.00	(299)
(Includes PlusPerfect)				
PlusPerfect	WD14NS	150.00	129.00	(99)
Word Processing Utilities				
Format110	FM12NS	\$39.95	\$35.95	
FormatPlus	FP11NS	79.95	69.95	(49)
MemoMaker Pack	FM14NX	159.90	125.00	
(Format Plus, Webster Spelling Checker)				
Formatter	FM11NS	59.95	49.95	
HPrint	HP11NS	80.00	75.95	
PrinterTalk	PT11NS	49.95	44.95	
PrinterTalk, Format110	PT12NS	89.90	59.95	(49)
RightWords Dict. Ext.	RW12NS	29.95	29.95	
RightWriter	RW11NS	95.00	89.00	(79)
Webster Speller	WB11NS	79.95	69.95	(49)
WordPlus Speller	WP11NS	150.00	99.00	(79)
SpreadSheet and Statistics				
As-Easy-As	AC11NS	\$99.95	\$79.95	(59)
101 Macros	MC11NS	69.95	62.95	
Lotus 123, v2.01 / Symphony				
P.Plus Software Driver	LT14NS	69.95	59.95	
SideWinder and Utilities	SW13NS	79.95	69.95	
SideWinder	SW11NS	69.95	59.95	(49)
Statistix 2.0	ST11NS	169.00	159.00	
Database/Accounting Software				
Condor 3	CR11NS	\$495.00	\$379.00	(299)
Condor Jr	CR13NS	99.95	89.95	
Used dBase II	DB11UC	550.00	295.00	
Dac-Easy Accounting	DC11NS	150.00	129.00	
Communications				
Kermit	KE11NS	\$ 19.00	\$ 19.00	

Relay Gold (Plus)	RG11NS	295.00	279.00	
TermPlus	TE12NS	99.95	79.95	(49)
Term110	TE11NS	99.95	79.95	
CompuServe starter kit	CM11NS	39.95	35.95	
YTERM	YT11UC	135.00	49.95	

## File Transfer

HPDuette for P.Plus	DU11NS	\$99.95	\$89.95	
Link110	LK12NS	90.00	85.95	
Link Plus	LK11NS	90.00	85.95	
ReadHP	RD11NS	79.95	69.95	

## Productivity Boosting Utilities / Games

BacTools	BC11NS	\$49.95	\$39.95	
DOS Tools	DT11NS	44.95	39.95	
FilePlus	FE12NS	69.95	59.95	(49)
GamesPlus	GA11NS	99.95	69.95	(49)
Norton Utilities Adv.	NU12NS	150.00	129.00	(99)
Norton Utilities	NU11NS	99.95	89.95	(79)
Private File	PF11NS	39.95	34.95	
Shelp	SH11NS	55.00	49.95	(49)
Squish Plus (P.Plus)	SQ11NS	129.00	99.95	(79)
Tiger Fox	TF11NS	32.95	29.95	
Time Manager (HP110)	SB11NS	9.50	9.50	(Free)
Typing Whiz	TW11NS	49.95	39.95	

## Graphics

Flowcharting II+	FL11NS	\$229.00	\$199.00	
Log.Mouse P.Plus System	MS15NM	219.00	179.95	
PrintMaster (P.Plus)	PR11NS	79.95	69.95	
Sketch	SK11NS	80.00	75.95	
Sketch Halftone disk	SD11NS	9.50	9.50	

## Programming

Turbo Pascal 5.5, P.Plus	TP52NX	\$219.00	\$175.00	
Upgrade for Plus, HP150	TP15NS	69.00	69.00	
(must own IBM PC Turbo 5.5, honor license)				
T.Pascal 3.0 Optimizer	TP17NS	125.00	119.00	
Used MS BASIC	MS11UC	325.00	165.00	
Used compiled BASIC	MS13UC	425.00	225.00	
Used MS GW BASIC	GW11UC	425.00	250.00	
Used Programmer's Tools	PT11UC	325.00	175.00	
Used FORTRAN	FO12U1	395.00	250.00	

## Project Management

PertMaster for HP110	PR11NS	\$695.00	\$499.00	
PertMaster for P.Plus	PR12NS	695.00	499.00	
Milestone	ML11NS	99.95	89.95	

## Learning Material for HP110, P.Plus

How to Use the HP				
Portables Video Tapes	VP11NM	\$150.00	\$119.00	(99)

# LS/12, PORTABLE VECTRA PRICE LIST



Product	Part Num.	Retail Price	Sub. Price
---------	-----------	--------------	------------

## LS/12 SPECIFIC PRODUCTS

### LS/12 COMPUTERS

Used LS/12, 20 Meg Drive	LS11UM	Call for pricing, avail.
Used LS/12, 40 Meg Drive	LS12UM	Call for pricing, avail.

### LS/12 Memory

1 Meg EMS Memory	EM11NH	\$ 295	\$ 285
4 Meg EMS Memory	EM12NH	1195	1095

### LS/12 Internal Modems

HPD1502a 2400 Modem	IM11HL	\$449	\$369
Datatar 5, 2400/MNP	DA11HL	599	539

### LS/12 Drives

Weltec 5.25" Drive	WE11NH	\$349	\$299
LapTape tape backup	LA11NH	795	695

### Additional LS/12-Specific Products

Expansion Chassis	EX11NH	\$499	\$449
Numeric Keypad	NU11NH	129	115
HPD1057A Battery	NB11HL	299	269
HPD1058A Recharger	BC11HL	109	109
HP Carrying Case	CC11HL	99	80
80287 math coprocessor	MA11HL	649	575

## PORT. VECTRA CS SPECIFIC PRODUCTS

### PORTABLE VECTRA CS COMPUTERS

New Portable Vectra CS 20	VE13HC	\$3595	\$1795
Used Portable Vectra CS 20	VE17UC	Call for pricing, avail.	
Used Portable Vectra CS	VE12UC	Call for pricing, avail.	

### Internal Modems

HPD1003A 2400 Baud	VE16UC	Call for pricing, avail.
HPD1002A 1200 Baud	MO11UC	Call for pricing, avail.

### Serial card and EMS Memory

Dual serial/EMS Card	AD11HC	Call for pricing, avail.
1 Meg EMS memory	EM11HC	\$595 \$295

### External Hard Disk

TravelDisks: hard disk, P. Vectra CS bus extender card, cable			
TD-10 (10 Meg) new	TD11NH	\$ 995	\$ 945
TD-10 (10 Meg) used	TD12NH	650	595
TD-20 (20 Meg) new	TD13NH	1095	995
TD-20 (20 Meg) used	TD14NH	775	725
TD-30 (30 Meg) new	TD15NH	1195	1095
TD-30 (30 Meg) used	TD16NH	900	835
TD-40 (40 Meg) new	TD17NH	1295	1195
TD-40 (40 Meg) used	TD18NH	1100	995
TD-100 (100 Meg) new	TD19NH	1895	1795
TD-100 (100 Meg) used	TD20NH	1500	1395
TD-250 (250 Meg) new	TD21NH	3495	3195
TD-250 (250 Meg) used	TD22NH	CALL	CALL
Extra P.Vectra Bus Extender	TD23NH	80	75
Extra cable	TD24NH	110	99
Extra IBM Bus Extender card	TD25NH	50	47

### Other Vectra CS Products

HP-IL Adapter Card	HP16NM	\$245.00	\$235.00
HPD1007A Soft Case	CS12HC	Call for pricing, avail.	
HP69009 Battery	BA11HC	250.00	225.00

### Monitors for Vectra CS (and LS/12)

Monochrome Monitor	VI12HC	129	119
CGA Monitor	MO12HC	399	299
EGA Monitor	MO13HC	599	479

## THE PORTABLE PAPER

(Subscribers Disks Only Available With Subscriptions)

1990 Subscription & Disk	PPN1PS	\$55.00
For Vectra CS, 1988-90 issues, disks	VE11PK	89.00
For Vectra CS 1988-89 issues, disks	PP15PB	59.00
For LS/12 1989-90 issues, disks	LS11PK	69.00
For LS/12 1989 issues, disk	PP12PK	39.00
Individual back issue	PP99PB	9.20
PP Binder Vol.3	PB13NM	7.00
PP Binder Vol.4	PB14NM	7.00
PP Binder Vol.5	PB16NM	7.00

## USED LS/12, P.VECTRA CS PRINTERS

New Diconix - parallel	DT11NH	\$ 519	\$ 399
New Diconix - serial	DT12NH	539	415
Serial HP2225D ThinkJet	TJ14UC	495	295
Parallel HP2225C ThinkJet	TJ11U1	495	295
DeskJet Printer, cable	DJ11UC	795	425
DeskJet Plus	DJ12UC	995	CALL
PaintJet	PA12UC	1395	CALL
LaserJet 500 Plus	LA13UC	4200	CALL
LaserJet IID	LA12UC	3795	CALL
Rugged Writer	RU11UC	1695	CALL

## LS/12, P.VECTRA CS PERIPHERALS

### Portable Modems / FAX

WorldPort FAX/Modem 2496	WF11NH	\$ 699	\$ 599
WorldPort Modem 1200	WM11NH	199	179
WorldPort Modem 2400	WM12NH	359	319
WorldPort M. 2400/MNP	WM13NH	499	425
WorldPort serial cable	WM14NM	30	20
WP 1200 Upgrade kit	WM13NG	199	179
WP Acoustic coupler	WM16NH	79	79

### External hard drive / tape backup

Weltec Serial 20 Meg Hard Disk (PhD)	WE12NH	\$1099	\$ 899
Valitek Serial and Parallel Port	Tape backup units		
60 Meg Valitek	VA11NH	1695	1495
160 Meg Valitek	VA12NH	2395	1995

### Other LS/12, P.Vectra CS Peripherals

EtherNet Adapter	ET11NH	\$695	\$629
Logitech Mouse	MS14NM	119	99
Statpower PC100+ Inverter	ST11NH	179	169

## LS/12, PORTABLE VECTRA SOFTWARE

The Editor II	ED11NS	\$ 99.95	\$ 79.95
Condor 3 for IBM	CR11HM	495.00	379.00
LapLink	LA11NS	139.95	119.00
NoSquint	NO11NS	39.95	37.95
Squish Plus	SQ12NS	99.95	89.95

CALL FOR CONSULTATION AND PRICING  
ON OTHER IBM COMPATIBLE SOFTWARE PRODUCTS

## LS/12, P.VECTRA ACCESSORIES

### Printer Supplies

TJ plain paper cartridge	TJ15HC	\$10.95	\$10.95
TJ inkjet paper cartridge	TJ14HC	10.95	10.95
HP92261n inkjet 2500 z	TJ12HC	64.95	59.95
HP51630a inkjet 500 z	TJ13HC	19.95	19.95
DeskJet ink cartridge	CT11HC	19.95	19.95

### Disks

10 3.5" disks and case	DS11NM	\$44.90	\$29.95
10 3.5" 1.44M disks, case	DS12NM	69.95	59.95

### Cases

Targus leather system	TA11NM	\$199.95	\$179.00
Targus nylon system case	TA12NM	99.95	89.95

### Cables

Standard Parallel Cable	PL11NM	\$29.95	\$24.95
P.Vectra 25-pin serial prn	SE12HC	\$29.95	\$24.95
9-pin AT serial printer cable	SE11HC	\$29.95	\$24.95

## ADDITIONAL COMPUTERS

**USED HP150 COMPUTERS, DRIVES, PERIPHERALS, ACCESSORIES, SOFTWARE: CALL**  
Free HP150 Catalog CAT150 0.00 0.00

## NEC LAPTOPS INCLUDING 4.4 ULTRALITE: CALL

## TOSHIBA LAPTOPS: CALL

## MIT IBM COMPATIBLE XT, AT, 386 SYSTEMS: CALL

1 year on site warranty. Great reviews.  
Call for pricing and consultation. We'll help you build a system exactly suited to your needs and budget. Here is sample PC Magazine Editor's Choice MIT system:

12 MHZ AT 286 compatible,  
1.44 Meg Floppy,  
40 Meg Hard Drive,  
Monochrome Monitor \$1430

## PERSONALIZED SOFTWARE COMPATIBLE XT, AT, 386 SYSTEMS

1 Year warranty. High Quality. Lowest pricing.

Call for pricing and consultation. We'll help you build a system exactly suited to your needs and budget.

### Sample Systems

10 MHZ XT Compatible,  
640K Memory,  
720K 3.5" Floppy, 20 Meg Hard Drive,  
Monochrome monitor \$879

12MHZ AT 286 Compatible,  
1 Meg memory,  
1.44 Meg 3.5" Floppy, 40 Meg hard drive,  
Monochrome monitor \$1199

386SX Compatible,  
16MHZ,  
1 Meg memory,  
1.44 Meg 3.5" Floppy, 40 Meg Hard Drive,  
VGA color monitor \$1895

**Remember:  
We'll take your current system in trade**

(ROM Burner article, continued from page 19.)

## LIMITATIONS

There are some limitations to the use of EPROMs:

- **File Size** --The easiest software to put on a ROM is a single, independent program less than 128K, or data file less than 128K.

There is a limit of 256K to the size of a Portable Plus ROM subdirectory (one pair of 128K byte ROMs). That means that (normally) no one file can be greater than 256K. We include special software (with instructions) that "fools" the system so that it can read .EXE (program) files greater than 256K. An engineer is currently working on a similar solution for non-program files greater than 256K. We'll report if he solves the problem and make sure that anyone who orders a ROM kit gets a copy of his solution.

Some programs require a number of files to be in the same subdirectory. If the size of that subdirectory is greater than 256K, it may be impossible to ROM the files without changing the program itself.

Similarly, some programs expect some files to be in certain places (e.g. our Webster's Speller). To get such a program to work may require you to write special batch files.

- **Some programs actually modify themselves when running** -- An example of this is WordPerfect 4.2. These programs cannot be put on ROM because ROM cannot be written to.

In most cases you will be able to put what you want on ROM. Hopefully, with many people using this ROM burning kit, general solutions for reoccurring problems will emerge and be shared in these pages.

## WHAT'S INCLUDED IN OUR ROM KIT

When you purchase our ROM burning kit, you will receive the following:

- Personalized Software's Serial ROM burner for Portable Plus (cable included);
- Software to burn ROMs and additional utilities to facilitate the process;
- Clear manual with step by step tutorial on how to use ROMs and the additional utilities;
- Ultraviolet ROM eraser;
- ROM chips (two 128K custom EPROMs from Personalized Software).

Additional chips and accessories are available as described on the next page.

*[IMPORTANT NOTE: We should be shipping kits by June 30. We will ship on a first-ordered, first-served basis. There is a two- to three-week lead time for us ordering the ROM burners, and a four- to eight-week lead time ordering the ROMs. If you order your ROM kit early, it will give us a much better idea of the demand for the product so we can maintain a proper inventory. It will also insure that you will receive your ROM burning kit and ROMs as soon as we start shipping.*

*As a matter of policy, we do not charge credit card*

*orders until we ship the product. We do, however, cash checks (as they usually come with an order with additional products that we can ship). In this case, make your check out for the exact amount and write a little note not to cash the check until we are ready to ship.]*

## EPROM Burner Ordering Information

Product Description	Product Number	Retail Price	Subscriber Price
■ <b>EPROM Burning Kit for Portable Plus</b> -- (includes ROM Burner for the Plus, serial cable, ultraviolet eraser, software & documentation, and two, 128K EPROMs)			
	EP10NH	\$695	\$595
■ <b>128K EPROMs</b>			
Single EPROM	EP11NR	\$69	\$59
Set of 4 EPROMs	EP12NX	\$276	\$199
■ <b>Non-erasable 128K PROMs</b> -- (ideal for making multiple copies of ROMs)			
Single PROM	EP18NR	\$64	\$54
Set of 4 PROMs	EP19NX	\$256	\$179
■ <b>64 K EPROM (27C512, 12.5 volt)</b>			
	EP13NR	\$25	\$22
■ <b>Software &amp; Manual only</b> -- (useful for burning your own 64K EPROMs for the Portable Plus using a different ROM burner)			
	EP14NS	\$250	\$195
■ <b>Portable Plus ROM drawer</b> -- (needed for Portable Plus to accept ROM chips)			
	SW11UC	\$195	\$99
■ <b>Custom Burning</b> -- (includes burning, 1 EPROM and ten minutes of testing to insure ROM works on Plus)			
	EP15NE	\$150	\$135
■ <b>Custom Consultation</b> -- (additional testing, batch file rewriting, etc.)			
	EP16NE		\$75/hour
■ <b>Two for One Trade-in</b> -- (send in two 64K ROMs purchased from us and we'll combine them into a single 128K ROM)			
	EP17NG	\$69	\$59
■ <b>Volume Discount on Custom Burning</b> Call for a quotation			

## As-Easy-As, Popular Spreadsheet for the Plus

P+

*AS-EASY-AS, the low-cost winner of the Lotus 123 clone wars, has been specially adapted to run on the Portable Plus. A PC version is also available for the LS/12 and Vectra.*

*By Richard Hall*

As-Easy-As is the award-winning shareware spreadsheet program developed by Trius, Inc. If you are familiar with Lotus, or any of its clones, you'll have no trouble adapting to As-Easy-As--it can look, feel, and act just like 123.

**P+ SPREADSHEETS**

A spreadsheet is a large grid of cells formed by interconnecting columns and rows. Each cell is uniquely identified by a column and row coordinate and can contain data or a formula for calculation of data. The As-Easy-As grid can have as many as 8,192 rows (1 through 8,192) and 256 columns (A through IV). People have been using pencil and paper spreadsheets (ledgers) for centuries to keep track of and relate financial data. Needless to say, entering or deleting all that data, and calculating results by hand, is a very time-consuming process.

The 1979 release of VisiCalc, the Apple II spreadsheet program, automated the spreadsheet process and revolutionized business computing. Lotus captured the PC spreadsheet market by introducing 123, a spreadsheet program that produced computer generated graphics including tables, bar and pie charts. There are now a number of very sophisticated and expensive spreadsheet programs including 123 2.2 & 3.0, Microsoft's Excel and Plan Perfect, and Borland's Quattro Pro.

There are, in addition, a growing number of less-expensive spreadsheet programs offering varying degrees of sophistication and 123 compatibility. As-Easy-As is the best of these, and is capable of looking like 123 and using Lotus 123, 2.0 and 2.01 worksheets (as well as those generated by spreadsheet programs compatible with 123).

**DESCRIPTION**

If you are already familiar with 123 or its clones, you will have no trouble using As-Easy-As. The beginner has access to on-screen tutorials for all the basic, and some of the special features. Create on your Edisk a directory named ASEASY and copy the required files directly to it (please see file description below).

All program, document, and setup files occupy 353K and fit easily on a single 3.5" floppy disk. (The printer control file and a number of additional document files, worksheets, and .EXE files are compressed in a file named ASAU400.COM. Type **asau400** and these will be decompressed and the individual files will appear. The decompressed files occupy an additional 56K. Once decompressed, ASAU400.COM can be deleted, saving 36K.)

The following chart lists the files on the IBM PC-compatible shareware version of the product. The Portable Plus version will sport files of similar size and contents.

**As-Easy-As Files**

File name	File size	Description
<b>REQUIRED</b>		
ASEASY.EXE	204,784	Main program file
ASEASY.MSG	9,596	Opening message file
Total	214,380	
<b>FEATURES</b> (useful but not absolutely necessary)		
ASEASY.CFG	298	Configuration file
ASEASY.PRT	184	Printer control file
ASEASY.HLP	58,327	Help file
HTREE.EXE	9,185	Runs Help file from As-Easy-As
Total	67,994	

**ADDITIONAL**

(Documents, worksheets, setup and graphics programs)

LICENSE.DOC	4,133	License agreement for As-Easy-As
READ.ME	19,512	Start-up instructions
VENDOR.DOC	3,784	Info on distributing shareware
ORDER.ME	4,301	Active user registration order form
SETUP.BAT	2,854	Auto-setup file
YESNO.COM	97	Part of the setup procedure
ASAU400.COM	36,610	Compressed file containing additional files and documents
Total	71,291	

**CONTAINED IN ASAU400.COM**

ASEASY.PRT	184	Printer control file
LNDSCAPE.EXE	8,537	Add-in for landscape printing
LNDSCAPE.DOC	2,584	Documentation for LNDSCAPE
PRINTDOC.EXE	7,465	Prints documentation from Help file
PSETUP.EXE	5,701	Setup for graphics printer add-in
PSETUP.DOC	2,995	Documentation for PSETUP
LNK.WKS	1,121	Sample worksheet
STRINGS.WKS	5,279	" "
USRFUNC.WKS	5,199	" "
DFILE.WKS	2,509	" "
GRAPHS.WKS	11,889	" "
LINK.WKS	2,140	" "
Total	55,603	

AEA can be started using option switches invoking EGA support for PC compatible users, quick screen updates, column header character, and suppression of row and column borders. The resident macro language allows AEA to emulate the appearance of 123, and several other popular spreadsheet programs. Other features include the following:

- Accommodates large worksheets (8,192 rows by 256 columns)
- Choice of Pull Down or Panel Menu Interface;
- Choice of Functions including mathematical, statistical, logical, financial, string, date, time, and user-definable;
- Matrix operations;
- Powerful frequency distributions tables (Bins);
- Capable of linking information from worksheets and disk with current worksheet;
- Versatile and powerful graphics capabilities including support for 9/24-pin and LaserJet printers, ability to create .PIC files, comprehensive chart-generation capabilities for bar, line, X-Y, pie, stacked bar, hi-lo, polar, area charts and delta semi-log and log-log graphs;
- X-Y data regression;
- Database operations, data input forms, reads/writes dBASE files;
- Text search, replace, justify;
- Goalseeking capabilities (give desired answer and AEA gives you the input);
- User configurable printer setup file
- Worksheet auditing capabilities
- Named range, function, and macro selection lists
- Multiple planes (3-D simulation);
- Macro programming language including over 70 powerful macros;
- Macro record/playback capability and single stepping through macros;
- Full support of sub-directories and path names;

- Support of CGA/EGE/Hercules graphics cards for PC compatibles;
- User-configurable screen options;
- Able to shell to DOS;
- TRIUS add-ins;

The command structure is very similar to Lotus. The slash (/) key involves the main menu in the form of a pop-up panel. Highlighting each selection displays sub menu choices horizontally along the top of the screen.

There are several features not contained in Lotus 2.01, including the addition of matrix operations for the addition, subtraction, division, and transposition of matrices.

### FOR THE PORTABLE PLUS

**P+** We sent As-Easy-As publishers, Trius, a Portable Plus and technical documentation. They reworked their program so that it would run properly on the Portable Plus.

We are currently evaluating a beta test copy of As-Easy-As for the Portable Plus. The main files will take about 220K of Edisk space and require about 280K of main memory. As with Lotus, if you have larger spreadsheet files, you will have to increase main memory. We were able to compress the main As-Easy-As file from 210K to 110K using LZEXE described in the lead 110% article. However, As-Easy-As then required around 340K to function properly. The numbers may change with the final version of As-Easy-As and with newer version of LZEXE.

We will make versions of As-Easy-As available to run from electronic disk or from ROM. As-Easy-As will be the first inexpensive, yet powerful spreadsheet that can run from electronic disk on the Portable Plus.

### ORDERING INFORMATION

As-Easy-As 4.00 was developed by Trius, Inc., North Andover, MA. The Portable Plus version of As-Easy-As is available exclusively through Personalized Software and retails for \$99.95, \$79.95 for subscribers. The disk and ROM backup package retails for \$195. We expect to be shipping by the end of May, but please be patient with us if it takes a little longer.

The PC version is available as shareware. With shareware, you are allowed to evaluate the product for 30 days. If you decide to continue using As-Easy-As, you must become a registered user by contacting Trius and paying a \$50 fee (plus \$5 shipping). Trius will then send you the most recent release of As-Easy-As, along with the current documentation.

Trius, Inc.  
P.O. Box 249  
North Andover, MA 01845  
U.S.A.  
Phone: 508-794-9377  
Fax: 508-688-6312  
CIS: 72727,616

### **P+** Games Disk Available -- Bridge Now Included!

*By Richard Hall*

Bridge has been added to Chess, Yahtzee, Go-Moku, and seven other games programs now available on disk for

Portable Plus users.

Bridge is one of the most popular card games in Europe and North America. The game program assumes you already know how to play. If you don't, find a beginner's instruction book at your library or bookstore. If you are a beginner, this version of bridge is an excellent way to master the fundamentals of bidding and playing.

After installing the games on your Portable Plus, simply select Bridge from your PAM screen and use the Bridge Options Menu to select how you want to play. (For instance, you can select one or more hands to play and you can decide to display all four hands). You can change any of the default settings, or press **P** to begin playing. The Bridge Game Screen with Bid Menu will appear. The program will automatically bid and play its own hands. You will be prompted when it's your turn to bid or play.

The Bridge program is easy to use, and comes with complete documentation that thoroughly describes the menu options, the modified Goren bidding system, bidding conventions, and bidding strategy. If you're at all familiar with the card game, it will be very easy to use. If you've never played Bridge, this program and a good instruction book will be a good way to learn.

### OTHER GAMES ON GAMESPLUS DISK

Ten other games are included on the GamesPlus disk. They include the following:

- Chess -- the classic game of strategy;
- Go-Moku -- a kind of Japanese Tic-Tac-Toe, but much more sophisticated;
- Othello -- an outflanking game played on an 8x8 grid board;
- Fastmind -- a code breaking game;
- Landmine -- traverse a minefield without stepping on a mine;
- Yahtzee -- roll 5 dice to get specific combinations for maximum score (a little like playing Poker with dice);
- Memory -- a game of finding matched pairs among a set of overturned cards (like "Concentration");
- HP-Amateur -- program that asks questions and guesses what you're thinking about;
- FoxHound -- a strategic chase game;
- Tic-Tac-Toe -- classic game of "Xs" and "Os".

### GAMES ON EPROM

We were able to add Yahtzee to the five other games previously available on the GamesPlus ROM Backup Package. The ROM package now includes the complete GamesPlus disk, documentation, and two 64K ROM chips with Chess, Go-Moku, Othello, Fastmind, TigerFox, and Yahtzee on them. TigerFox is not included on the disk version of GamesPlus, but can be purchased separately on disk.

### ORDERING INFORMATION

The GamesPlus disk retails for \$99.95 and is available to subscribers for \$69.95. The GamesPlus ROM backup package (including TigerFox) retails for \$205 and is available to subscribers for \$175.

TigerFox on disk retails for \$32.95 and is available to subscribers for \$29.95. ■



# Erased your files? Get them back with The Norton Utilities!

## HOW TO RESTORE DELETED FILES

It happens to the best of us. One slip of a finger and a whole week's worth of text or data is past history. *But not if you have THE NORTON UTILITIES!*

Just type **qu** (for quick unerase), give the first letter of the name of the file you erased, and *the file gets restored*. Miraculous as it sounds, in many cases that's all there is to it!

## HERE'S HOW IT WORKS

How can a deleted file get unerased? Simple. The file isn't really deleted in the first place. When you delete a file, all that actually gets erased is part of the file's directory entry. (That's why it only takes an instant to delete an entire file.) Without a directory entry, DOS can't find the file, but THE NORTON UTILITIES can.

Now, what about those cases where you can't possibly recover a file because you've already partially overwritten it with other files? Surely THE NORTON UTILITIES can't help you then?

### VERSION 4.0 OR ADVANCED EDITION —WHICH ONE SHOULD YOU BUY?

If you have an HP110, The Advanced Edition does not work. If you have a Portable Plus or HP150, The Advanced Edition of The Norton Utilities includes all of Version 4.0, plus many additional features. Among these are:

**1. Speed Disk:** Packs the files on a floppy, electronic, or hard disk more efficiently. This reduces disk head wear and significantly reduces the time it takes to save or retrieve a file.

**2. Advanced "NU" Program:** Undeletes blocks of text from disks that have become "corrupted" (unreadable by DOS). Also lets you access and modify the DOS directory and F.A.T. table.

**3. Format/recover:** Restores all the files on a hard disk if you have accidentally reformatted it. (Note: this feature does not work on the HP150 or Portable Plus.)

Our recommendation: If you have a hard disk, or want to be able to manipulate directories, or need to access ASCII data from non-HP formatted disks, use the Advanced Edition.

Wrong—they can! THE NORTON UTILITIES won't recover the entire file, of course, but they *can* help you restore the portions of the file that still remain on the disk.

It's done with a powerful utility called **nu** that lets you display, change, and capture to a file any information on any disk. In complex cases you may need to

*"Indispensible."*  
—PC Magazine

*"You'll bless this disk."*  
—Peter McWilliams  
(The Personal Computer Book)

*"Don't compute without it."*  
—The New York Times

do some detective work, but **nu** will help you find whatever remains on the disk, thereby saving you from countless hours of retyping lost data.

## POWERFUL FILE MANAGEMENT COMMANDS

In my opinion, *the ability to recover lost files alone makes THE NORTON UTILITIES well worth the price*. But there's even more to the package: THE NORTON UTILITIES are also an excellent *disk management system*. Here are some examples of what you can do:

Let's say you want to sort directories and files physically on disk—either by name, extension, size, date, time, or by any combination of these. Just use the **ds** (disk sort) command. I use this one to sort my electronic disk files by size all the time. Then when I display the directory, the larger files come at the end of the list, and I can see at a glance which ones to move elsewhere to free up any needed amount of disk space.

Or let's say you remember putting the phrase "a penny saved is a penny earned" into a text file on your floppy or hard disk but you can't remember which file it was—or even which directory. How to find it? *No problem*. Just type **ts** (for text search), specify the phrase, and the program will display every occurrence of the phrase, identifying each occurrence by directory and file.

Or let's say you can't remember which subdirectory you put a given file into. Instead of hunting for the file manually,

**"THE NORTON UTILITIES are among the most helpful utilities I've run across. I use them myself every day, and in my opinion, they're a must. Here's why."**

*Hal Goldstein, Publisher  
The Portable Paper*

just type **ff** (find file) and specify the name of the file and the directories to search through. The program does the rest.

Other useful features include the **fa** command, which lets you change file attributes (for example, to convert HP150 read-only files into erasable files), and the **fs** command, which tells you the total file size of a group of files (I often use it to find out the total disk space occupied by my Lotus worksheet "WKS" files or by all my text files from a given project).

## CUSTOMIZED TO YOUR COMPUTER

Because of their great helpfulness and ease of use, THE NORTON UTILITIES are a best-seller in the IBM PC market. Personalized Software is authorized to distribute them on 3½" disk for users of the HP150, HP110 and Portable Plus. (All it takes is a few keystrokes to customize THE NORTON UTILITIES to your machine; just follow the simple customization instructions included on the disk.) Also included in our package are the standard 5¼" disk sold by Peter Norton for IBM PCs.

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# 2400 baud portable modem for your HP Portable



The 4"×2"×1" WorldPort 2400 costs less than HP's internal modems, is faster, and can be used with more than one computer.

## Weighs only 6½ ounces!

If you do data communications with an HP Portable or Portable Plus, you've probably found the internal 300- or 1200-baud modem to be too slow. Until now, the only solution was to buy a bulky external modem and lug it around wherever you go.

A better solution is the Worldport 2400. It measures a trim 4"×2"×1", it's rugged, it weighs only 6½ ounces including the battery, and it sends and receives at 300, 1200, and 2400 baud.

### A MYRIAD OF FEATURES

The Worldport 2400 has a wealth of features you would expect to find in a desktop modem several times its size.

#### EXTRA BONUS FOR USERS OF THE IBM PC AND NEW HP PORTABLE VECTRA

Included with the WorldPort 2400 at no charge is the acclaimed communications and remote control software package, Carbon Copy PLUS (retail value: \$195). The program also comes free with the WorldPort1200—WorldPort2400 Upgrade Kit. (Carbon Copy PLUS will not run on the HP110 or Portable Plus, but both WorldPort modems will run with HP's communications software, namely the Terminal program for the HP110, and TERM and Reflection for the Portable Plus.)

For example, the WorldPort 2400 has auto-dial, auto-answer, and both pulse and tone operation. It comes with a standard modular phone plug for connecting with the telephone line. It offers non-volatile storage of up to 20 commands. And it is fully compatible with the industry-standard Hayes AT Command Set, and with the HP110's Terminal software and the Portable Plus's TERM and Reflection software.

Since a modular plug is not always available, the WorldPort 2400 also has a built-in interface for an acoustic coupler. (The coupler, an optional extra, runs at 300 and 1200 baud.) The unit is compatible with both the internationally accepted CCITT communications standards and the Bell communications standards recognized in the U.S.

The WorldPort 2400 uses a standard 9-volt transistor radio battery (it's included with the unit). A fresh battery will keep the WorldPort humming for 8-10 hours. You can extend battery life by operating the unit from a wall outlet whenever possible, using the optional AC adapter. The WorldPort 2400 draws no power from your Portable's battery.

#### DOUBLE GUARANTEE

In addition to our standard 60-day money-back guarantee, the

WorldPort 2400 comes with a 2-year manufacturer's warranty covering defects in materials and workmanship.

The WorldPort 2400 offers portability, reliability, well-designed features, and ease of use. Order yours, risk-free, today.

	Retail Price	Subscriber Price
WorldPort 2400 modem	\$359.00	\$319.00
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WorldPort Modem 2400/MNP	499.00	425.00
		WM13NH
WorldPort 1200 modem	199.00	179.00
(without software)		WM11NM
Cable to connect modem to HP Portables	30.00	20.00
		WM14NM
Acoustic coupler (300/1200 baud)	79.95	79.95
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Upgrade kit: WorldPort1200—WorldPort2400	199.00	179.00
(includes Carbon Copy PLUS software)		WM13NM

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WorldPort 2400 and WorldPort 1200 are trademarks of Touchbase Systems, Inc. Hayes is a trademark of Hayes Microcomputer Products, Inc. Carbon Copy PLUS is a trademark of Meridian Technology, Inc.

## Replacement Batteries Available

By Richard Hall

**110** Even rechargeable batteries eventually wear out. When you do, we can replace them with new ones! (Note: There is no difference between retail and subscriber price so only the latter is listed.)

Product Description	Part Number	Subscriber Price
HP-110 battery	BT12HC	\$39
Portable Plus Battery	BT11HC	\$59.95

NOTE: Batteries for the HP-110 and Portable Plus are normally installed only by authorized dealers - mainly because of the special tools required (8" torx driver and 7/32" nut driver). To make life easier and less expensive for our customers, we now include the tools, and clearly-written instructions so you can do the job yourself in about 5 minutes.

ThinkJet battery	BT14HC	\$47
HP-9114 Drive battery	BT13HC	\$65

### REFURBISHING YOUR HP9114 BATTERY

The HP9114 battery is expensive yet necessary to use the HP9114. If you were to open up the replaceable HP9114 battery pack, you would find batteries and a small PC circuit board. If your HP9114 battery does not work properly sometimes it's the board and sometimes it's the

battery. If you send in you HP9114 replaceable battery unit, we'll install a new battery and make sure the board works properly and then send the refurbished battery unit back to you. Doing so will save you \$30.

The other alternative to the HP9114 battery dilemma is purchase our HP9114 Empowerer. The Empowerer allows you to run your HP9114 off normal AC power without battery.

Send in 9114 Battery for Refurbish	BT11NG	\$35
HP9114 Empowerer	PR12NM	\$89.95

### TIPS TO EXTEND BATTERY LIFE

■ **Portable Plus and 110 battery** -- Don't allow these batteries to discharge completely. Lead-acid batteries normally operate best when kept as close to full charge as possible. If these batteries are discharged consistently below 60% charge (indicated on the PAM screen) their life expectancy decreases significantly. Don't allow the battery to discharge completely! Just a few discharges (to the Low Battery Indication) can permanently damage the battery.

You can leave your 110 and 9114 drive connected to the charger all the time. HP now recommends NOT to leave the Plus connected! After the Plus is fully charged, use it until the charge gauge reads between 60% and 80% before charging it again.

■ **ThinkJet battery** -- allow the battery to discharge until the yellow warning light comes on before charging it again. ■



# Through the Looking Glass

By Ed Keefe

## Stereo Shell for the Portable Plus

**P+** If you're frustrated by the limitations of PAM on the Portable Plus or equally frustrated by typing commands at the DOS prompt, then you might want to take charge of your computer with Stereo Shell (StS), a file manager program that works on 100% IBM compatibles and, with a little coaxing, the HP Portable Plus.

StS is similar to the excellent FilePlus program that Personalized Software offers. Like FilePlus, Stereo Shell will let you view two directories or disks simultaneously. You can tag files for deletion, copying, or moving with the space bar. Pressing the INSERT or DELETE keys (**ext-F7** and **ext-F8** on the Portable Plus) will tag or untag all the files in a directory. Beyond the usual copy and delete functions, Stereo Shell lets you highlight a file and either execute it (if the file is a COM, EXE or BAT file), view it, edit it, or compress it.

### DIRECTORY AND FILE VIEWING

Stereo Shell lets you view two different directory listings or the same directory in two separate windows. Although you can't copy or move files within the same directory, you can sort one window's files by date and the other window's files by size and then tag selected files for deletion--or backup--to another directory or disk.

Stereo Shell has a built in file viewer that lets you scroll forward and backward in a text file by pressing the arrow keys. It will even let you view files in a HEX format much like you might do with the Norton Utilities or with Debug. Viewing a file is a simple task. Just move the lightbar to a text file and press **return**. A menu will appear that will let you either VIEW the file or EDIT it, with your installed word processor. To make it even easier, Stereo Shell lets you move the lightbar by using the ARROW KEYS or by pressing the first letter in a file's name.

### INSTALLATION AND SET UP

Stereo Shell is fully configurable from within the program. There are options that let you change the colors, disable or enable zooming windows, and turn the sound-effects OFF. (On the Portable Plus it is critical that the sound effects be turned off, otherwise you will crash the computer and mess up its clock and calendar.)

### HOOKING PROGRAMS TO StS

You may hook your favorite word processor(s) and utility programs to Stereo Shell so that they can all be run by pressing a couple of keys.

Especially noteworthy is Stereo Shell's adroitness at managing compressed files. StS will drive any of the popular file compression programs with the flick of a finger. There is no longer any need to remember all the command line switches for PKPAK, PKZIP, PKUNZIP, LHARC or ARC. StS is even smart enough to bring up a special menu when you highlight a compressed file and press the Return key. This special menu will let you extract or add files from, or to, a compressed file. It will also let you view a list of files in a compressed file and extract them or delete them. You may also tag a group of files and add them to a new or existing compressed file.

### PLUSES AND MINUSES

The biggest plus for Stereo Shell is its size. StS uses a meager 23K bytes of precious Edisk. It has all the features of PAM and FilePlus, in a package that is half the size of either program.

Stereo Shell will run out-of-the-box on 100% IBM compatibles. It does have some minuses when running on the Portable Plus. Most notably, it must be used in conjunction with either the PPINT16 or PCRUN (88 subscriber disk) programs. You must also put the Plus in Alternate keyboard and display modes. Then you must be willing to spend an hour or so tinkering with the "colors" until you get the program to look presentable on the Plus's monochrome screen. The colors on the Plus will make parts of the program appear in inverse video or in narrow characters. Most importantly, when running Stereo Shell on the Plus you must remember to use /B COMMANDUR COMPUTER.

## Compress EXE Files with LZEXE.EXE

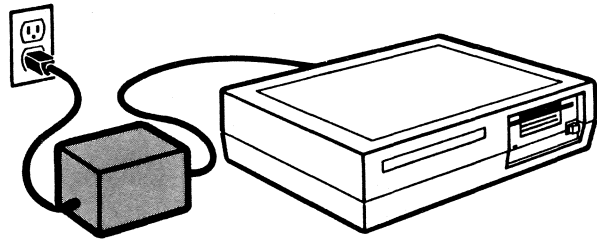
**P+** Also available from most local bulletin boards and from The FastAid Co., is the remarkable file compression program LZEXE.EXE. This program works only on 100% IBM compatible computers. It does not work on the Portable Plus. It is a specialized file compression program that will shrink the size of EXE files by one third to one half their original size. The resulting file is another EXE file which may be run directly. The new file waits until it is loaded into working memory before it expands to the size of the original file and runs. The time for compression is on a par with that for the PKZIP program. The time for expansion is negligible or barely noticeable. Even though the LZEXE program does not work on the Portable Plus, the compressed files do work. For example, I have compressed the Norton Utility Program from its original 130K bytes down to 75.5K bytes on an IBM compatible. I then moved the compressed file to the Portable Plus where it ran flawlessly.

The LZEXE program comes with a companion program that will change COM files to EXE files so that they too may be compressed.

The only drawback to using LZEXE is that its on-screen messages are all in French. A separate documentation file contains an English translation of the messages and instructions on using the program. All in all, LZEXE is the best thing to come out of France since champagne.

*[Ed has a modified version of Stereo Shell available for the Portable Plus as well as SCRNCN and LZEXE. Send Ed a formatted 3.5" disk and a stamped, self-address mailer (with enough postage, please) and he will copy the files*

# THE HP9114 EMPOWERER



If you've been frustrated trying to use your HP9114 external disk drive only to have the battery quit before you've finished your work, then you know the problem. Now you need the solution.

## THE PROBLEM:

The charge on your HP9114 battery doesn't last long enough for you to do all you'd like to. For that matter, in some cases it doesn't last long enough to do *half* of what you'd like to.

According to Hewlett-Packard, you get up to 40 minutes of continuous usage before the battery dies. We've never gotten more than 20. Just formatting disks, transferring files, or running disk-intensive software and getting it to work can be a major triumph.

**How many times have you wished you had a second external disk drive?**

The Portable Equipment Exchange, a division of Personalized Software, is selling HP9114A units including power supply at a substantial discount. See enclosed four-page brochure for details.

Plugging in the HP9114 doesn't help, either. That only recharges the battery—it doesn't let you keep working.

## WE HAVE THE SOLUTION:

The official HP suggestion is to buy another battery pack and keep both plugged in. When one loses power, replace it with the other. This seems clumsy to us. What if you want to do several hours of disk intensive work? **At Personalized Software we have a better solution—the HP9114 Empowerer.**

The Empowerer is special power supply that will allow your HP9114 disk drive to run forever. Just remove the battery pack,

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To run your HP9114 to your heart's content, order your HP9114 Empowerer today.

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PRODUCT NO. PR12NM

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## RECOMMENDED FOR:

HP110 Portable	•
Portable Plus	•
Portable Vectra	
HP150	
IBM PC and compat.	

*for you at no charge. Ed is using his own time so please be sure the disk is formatted and the mailer is properly addressed. Send disk to Ed Keefe, not Personalized Software, c/o Fastaid Company, 314 SW Logan, Ankeny, IA 50021.*

## GETCH Lets Turbo Pascal Correctly Interpret Function Keys

**P+** If you're a Turbo Pascal programmer, especially one who is using Turbo Pascal 5.x along with the TurboPlus Integrator, you may be interested in GETCH, a small function that performs essentially the same purpose as the READKEY function in Turbo Pascal. However, it does something that Readkey will not do on the Portable Plus: correctly interpret the function keys.

I have typically used PPINT16 or PCRUN with my Pascal programs to overcome the limitations of the Plus's keyboard.

On most computers, the function keys put two characters into the keyboard buffer. The first character is an ASCII #0 (called the NULL byte by C programmers). It was another programmer, Mike Ryan, who pointed out to me that the Plus's function and arrow keys all returned ASCII character #3 as the lead-in character for the function keys. I coded the GETCH function to take advantage of this hot tip. Now my Pascal programs no longer need the services of PPINT16 or PCRUN.

Here is the source code for the function embedded in a program that uses it.

```
Program Interpret_keys;
uses crt;
var ch:char;
```

```
Function Getch:char;
var k:char;
begin
  k := readkey; {use standard readkey}
  getch:=k;
  if (k=#3) and (keypressed)
    {If the lead-in char is #3 AND
     there is another key in the
     buffer, then...}
  then getch:=#0; {change this to #0 and return}
end;
```

```
begin
  repeat
    ch := getch;
    if ch = #0 then {test for function key}
      begin
        write('Function key : ',ord(ch),
              ' scan code = ');
        ch := getch;
        writeln(ch,ord(ch):4);
      end
    else {ordinary key }
      begin
        writeln('Ordinary key ',
              ' scan code = ',ch, ord(ch):4);
      end;
  until ch = 'q';
end.
```

When you compile and run the above program, be sure the Plus is in ALternate mode. If you run it in HP mode the lead-in character for the function keys will be #27--the Escape character.

Hope this helps, and until next time, Happy Porting.

*[Ed Keefe is an author, programmer, and computer science instructor. He is the president of the FastAid Company, 314 SW Logan, Ankeny, IA 50021. Ed's CompuServe ID is 73277,1064.]*

# THE SAVVY USER

By Thomas Page

**110** On the same day several weeks ago two different people said to me, "I don't know how you remember so much about computers." One of these people even said it after I admitted to not having the slightest idea how to do something in WordPerfect. I agreed it should be possible to do what she wanted to do, but I could not explain how to do it since I have found no compelling reason to learn WordPerfect. Let's be honest, I know a lot about computers. Equally honest, there is lot I don't know about them.

I think people's perception of my computer knowledge exceeds what is really there because I synthesize much of it rather than memorizing it. That is, by knowing a few basic techniques I am able to figure out a way to do something that I haven't done before. Anyone who successfully uses a computer synthesizes ways to do his job. In many ways doing a job with a computer is a craft. The technique is similar to that used by a skilled carpenter. No carpenter ever became skilled building palaces. He became skilled building chicken coops. Certainly building palaces improved his skill but these skills had to be built on a set of much more universal skills.

The most universal skill a computer user must know is file management. In addition to being a fancy calculator, a computer is a knowledge management tool and all knowledge is managed in structured files of some sort. Libraries index books and place them on shelves in conformity to the Dewey Decimal System. Courts use a system of docket numbers to identify records associated with various cases. Businesses maintain files storing all sorts of information: accounting data, plant design information, personnel records, legal records, etc. The list is almost limitless. When one masters the skill of arranging data in files the universality of that skill becomes apparent no matter what scheme is used to index the data, be it the local public library or a computer disk.

Working with DOS is very much like searching for a book at the public library. You may not like the Dewey Decimal System but it is the fastest way to find a specific book. If you are using a computer you must abide by the DOS filing system because it is the best one available. You must absolutely adhere to the rules specified by DOS. DOS places very few restrictions on filenames. (With the exception of files like PRN, COM1, LPT2, .BAT, .COM, and .EXE, you can name your file almost anything, as long as it adheres to the eight-character filename, three-character extension rule.) The eight character DOS filename is often criticized because it is difficult to write meaningful descriptions with only eight characters, but would you really want to deal with filenames requiring two lines to display?

## DUETTE

**P+** Regular readers know I use HP DUETTE to transfer files from my Plus to an IBM compatible via the serial port. They also know that it is a program that I hate to love. One of Duette's more annoying characteristics is that it leaves my computer configured to display the thin rather than the default bold font if I load Duette from DOS rather than PAM. I solved this problem with a small batch file that sends escape sequences to reset the terminal after Duette is exited. Of course I added a few additional escape sequences to improve the display while the batch file is executing.

```
echo off ^ [*dR ^ [[2J
cd b:\duette
b:hpd
echo ^ [[2J ^ [&d@ ^ [*dK ^ [*dQ
```

NOTE: ^ [ stands for the escape character which can be created from within The Editor by holding down **ctrl** and pressing [.

I was able to retain the HPD command by placing this batch file named HPD.BAT in A:\BIN, the first subdirectory in my DOS path. When I type **hpd** to load Duette, DOS executes HPD.BAT instead of HPD.COM since the batch file is found first. HPD.BAT is able to execute HPD.COM because the HPD command in the batch file is preceded by the **b:** drive designator and Duette has been made the current directory of the B drive by the immediately preceding line.

This batch file demonstrates that often the back-to-the-basics approach is best. My first solution to the problem was to use one of the advanced DOS procedures, pathing to a program, available through the BATCOM batch file compiler (please see Vol.5, No.1, Pg.37). The result was a COM file that took up three sectors of valuable E-disk. The straight batch file occupies only one sector.

## CLYDE

**110** If you haven't dialed into the CompuServe HP Forum and downloaded CLYDE, my 123 loader program, you should. **P+** It may change the way you work with 123. I even recommend it for people who do not use a Plus. **PV** I put versions for both the HP Portable Plus and generic PC clones in the ZIP file. **LS/12**

As I indicated in the last issue I was tardy in uploading CLYDE and some of the other compiled batch files I have been using on my Plus for some months. I was truthful when I said I had not completed the documentation but I did not tell the full story. I was also having a difficult time making the BATCOM compiled version of CLYDE load another spreadsheet when it was executed from a spreadsheet loaded by CLYDE. In practice this did not make much difference to me since I really do not want to use 123 as my computer control system. I wanted to prove that I could do it and I had made it work very well with my standard batch file version of Clyde, but it just wasn't going right with the compiled version. To perform this trick with the standard batch file I used some DOS gymnastics including setting environmental variables.

This problem was finally solved by using a technique that is often most useful for solving complex problems. Forget about it for a while. Because of the rush of Christmas and work deadlines I forgot about Clyde for about two months. When I sat down and began to work with the

Clyde code again it took about fifteen minutes to figure out the solution. My thinking had become totally polluted by gymnastics I had employed to work around DOS 2.1's inability to run a batch file as a subroutine in another batch file. This is not really a flaw, but is an often useful feature of DOS 2.1. Compiled batch files, on the other hand, make any other program or batch file executed within the compiled batch file a subroutine, and unlike standard batch file the calling program remains in memory and in control.

Even last November when I was first working with BATCOM I realized this difference between compiled batch files and regular batch files. However I had allowed the complex process necessary with the normal batch files to become ingrained in my thinking and I tried to solve the problem by adding even more complexity. Taking a break is effective in solving many problems because it breaks a faulty thought process. A two month sabbatical is a luxury that most jobs cannot afford. Often a five minute stroll around the park can just as effective.

### 110 P+ PV **\WORK\TOOLS.ZIP**

One of the most useful files on my computer is a ZIP file I keep on my primary working subdirectory. It is named TOOLS.ZIP and contains the following files:

ASCTABLE.TXT -- an ASCII table  
 MACROS.PRN -- 123 macros  
 SETUP -- ThinkJet setup strings  
 COL#.WK1 -- worksheet containing column numbers  
 STD.WK1 -- worksheet starter  
 SAVVY.NAM -- Savvy users name  
 NEW.MEM -- interoffice letterhead  
 NEW.LTR -- personal letterhead

If a nonexistent file is specified when loading 123 with CLYDE, CLYDE asks permission to start a new spreadsheet with STD.WK1, which is stashed in my TOOLS zip. Since uploading EDBAT, my text file manager and editor loader, to the HP Forum, I have added a new feature to my personal copy of the program. If the requested file is not found, EDBAT looks for a file with the requested extension that is named NEW. If such a file is found, it is renamed and loaded into the editor. If the file is not found, EDBAT will try to extract it from TOOLS.ZIP. This feature makes EDBAT integrate very well with my TMERG program since TMERG can create an addressed letterhead named NEW.LTR.

### **123.CNF AND PGRAPH.CNF**

The various configuration options available under the /WGD can be saved in a file named 123.CNF that 123 reads when it is first loaded. This file is updated when the /WGD command is issued. Similarly, settings for PGRAPH are saved in PGRAPH.CNF. There is more power to these files than the casual user may realize. Unfortunately there is little in the 123 manuals to indicate how to manage this power.

One approach to harnessing this power is to maintain a library of the files which are renamed to activate. A batch file for loading 123 can be designed to manage this library. Unfortunately it is a bit cumbersome and will slow the loading of 123, but it is much faster and more effective than resetting configurations within the 123 or PGRAPH.

Since most of us organize our disks with directories for various projects there is a simpler method that may be just as effective. Place configuration files in each working

directory. 123 and PGRAPH apparently look for the configuration file in the current directory first. The only real trick involved is to be sure your computer is configured to load these programs from the current directory. If you have not figured how to create a configuration file in the current directory, the answer is, don't. Copy one from some other directory to the current directory, load 123 or PGRAPH and update it. These programs remember where the configuration file was found and update that one when the UPDATE or SAVE command is issued.

This discussion may beg one question and that is, what if there is not a configuration file on the current directory--how do the programs find the configuration file? I am not sure of the order of precedence but the programs search the DOS path and the directory holding the program.

### **VERY LARGE SPREADSHEETS**

110 P+ PV What constitutes a very large spreadsheet is largely relative to memory available. A large spreadsheet on a 512K Plus is much larger than a large spreadsheet on the HP-110, but it may be significantly smaller than what would be considered a big spreadsheet on a computer with extended memory. No matter what machine one is using to run 123, operation becomes trickier as available memory declines.

I have one spreadsheet that reminds me of this every now and then. Yesterday while using the MOVE command to make some major reorganization and additions, I got a beep and an "Out of memory" message. Since vast amounts of memory can often be reclaimed by saving and reloading a spreadsheet, I immediately saved the spreadsheet. This was a mistake because shortly after reloading it I discovered that cell references in a number of formulas had turned to ERR. Fortunately I had worked on this spreadsheet for only about 30 minutes since I last used Duette to backup it up to my T3100.

Although they are not pleasant, I believe that everyone should sustain a major crash periodically. Sometimes it is the encouragement one needs to abandon inferior logic processes. We all have a tendency to hang on to bad solutions especially if they somewhat work. It is not unusual for efficiency gains achieved by reworking a process to exceed the time required to do it. Since the basic thinking is already done, it never takes as long to restore a lost procedure as it took to create it. Of course there is one danger that you must guard against in the restoration after a crash. There is the possibility of forgetting to restore something very important.

A number of people have commented on the legibility of my Plus's screen. The compromise HP made to achieve this legibility was to use an LCD with a resolution lower than that of most computer displays to produce maximum contrast and create a large bold character set that almost jumps off the screen. Being about half blind in the left eye and a member of the bifocal generation I very much appreciate this.

It's seldom noticed, but the Portable's characters are designed on a coarse 6 by 8 matrix which comprises the total number of screen pixels available in the area occupied by one character. I doubt many of you have sat down with a sheet of graph paper and tried to design characters by blocking out squares. Should you try it, you will quickly find that building legible fonts in a 6 by 8 matrix is difficult and in a smaller matrix, almost impossible. To make this long story short, The Plus' default font is the smallest font that can be displayed.

Some of you may have lusted for one of those programs that some eagle eyed-people use to make other computers



display more data by going to graphics mode and displaying smaller characters. I worked with a fellow who used one of these programs all the time. Although it would be nice to have such a program to be better able to understand the general layout of some spreadsheets, I could not use one as a normal mode of operation. When I looked over my associate's shoulder, I could never read his screen unless he changed to normal display.

The inability of the Plus to ever run one of these programs is not much of a concern to me. Actually it is just another opportunity to compute smarter. When working with 123 a few simple techniques can put much more data into the display. For example, never make columns wider than necessary. Sensible abbreviations help reduce column widths, especially of description columns. As a standard, I never use periods after abbreviations. Periods seldom add information and eventually one will make a line too long so it is simply best to avoid them altogether. Putting periods after abbreviations is something you learned in school and unlearning is difficult since it is now a habit. This rule is applicable only for spreadsheets. Correct form should be used for more formal text such as letters.

Another technique I use is to never underscore anything, since in 123 underscoring must be done on the next line. I find underscoring seldom adds information and if a schedule has too many underscores may become even less informative. This is certainly my opinion, but you might try experimenting and eliminate underscores from one of your spreadsheets and see what you think. Take a look at your headings and see if the number of lines can be reduced. The old trick of using an underscore to tie related columns under a common title uses an unnecessary line. Instead try extending the title with dashes on each side. For example:

```

      (1)      (2)      (3)
----- FIRST QUARTER -----
January  February  March

```

A spreadsheet often serves two conflicting needs. First it must be workable on the computer screen, and second it must produce reports that look good when printed. For example, short abbreviated line descriptions are desirable on the computer screen because they allow more area for displaying data, but longer and more descriptive titles are desirable for printed reports which will be read by people who are not as familiar with the data. A very simple solution is to write the description across several narrow columns rather than in one wide column. When this technique is used the /WTV or /WTB command can be used to lock titles in a manner to display enough to be useable when viewed on the computer, and when a printed report is desired the full width description can be printed. If this solution is not acceptable, two sets of descriptions could be written, one for the computer display and the other for the printed report.

*[Tom works for a natural gas pipeline company in Houston, Texas, and was one of the first to use PCs in the natural gas industry. His excellent contributions to The Portable Paper have proved beyond a shadow of a doubt that he is truly "The Savvy User."]* ■

Also works on the  
HP150.

## FilePlus: The Portable Plus file manager. Fast, sophisticated, easy-to-use!

- List files in two directories simultaneously
- Copy, move, and delete multiple files
- Sort directories
- Create protected ("Read-Only") files
- Back up only those files that have changed since last backup
- And much more!

When Hewlett-Packard introduced the P.A.M. file manager in 1983, the program was ahead of its time. With P.A.M., users could copy, rename, and delete files by pressing function keys instead of having to enter DOS commands.

Today, however, users are more sophisticated—and so are the file management programs that have come on the IBM PC market. These programs go way beyond P.A.M. in their abilities and in the convenience they offer the user.

Most of these file managers won't run on the Portable Plus, but we've developed one that does. It's called **FilePlus**, and here are its benefits:

### 1. Display two directories

This is a feature that even some of the most popular IBM compatible file management programs don't have! FilePlus lets you list two directories (from the same or different disks) simultaneously on screen. This makes it especially easy to move files back and forth between the two directories.

### 2. "Point and Shoot"

You don't have to wade through P.A.M.'s function key menus to perform a simple operation like copying a file.

Instead, you simply display the contents of the source and destination directories side-by-side, tag the file you want to copy, then use a simple Lotus-like menu to enter the "Copy" command with a single keystroke.

You use the same "Point and Shoot" method to run programs and to move, delete, view, etc. any files you wish.

### 3. Tag multiple files

You can tag any number of files in a directory, then perform the same action (copy, rename, delete, protect, etc.) on all of them in a single step.

### 4. Sort files

FilePlus can list the files in a directory by name, extension, size, or date. (An alphabetical listing by name helps you locate files in a hurry. A listing by size is useful in determining which files to erase in order to free up any needed amount of disk space.)

### 5. Single-step "Move" command

To move a file from one directory to another, you no longer have to copy the file first then delete the original. FilePlus lets you do it with a single "Move" command—and you enter the command with one keystroke!

### 6. Protect your files

You can protect your files (make them "Read-Only") to guard against accidental deletion. FilePlus even lets you do this with entire directories! You can unprotect the files whenever you wish.

### 7. Show attributes (Read-Only, Hidden, Archive)

FilePlus displays the attributes of all the files in a directory so you can view them at a glance or change them in a flash.

### 8. Backup only if changed

FilePlus allows you back up just those files that have been changed since the last backup.

FilePlus will save you time and effort, boost your productivity, and increase your enjoyment of your Portable Plus. Once you try FilePlus, you won't want to be without it.

Order FilePlus at our risk today!

FilePlus ..... \$69.95  
Portable Paper Subscriber's Price ..... \$59.95

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HP110 Portable	Portable Vectra
Portable Plus	HP150
IBM PC and compatibles	



By David Hughes

### ALWAYS OBSOLETE

**P+**  
**110**  
**PV**  
**LS/12**

The word "obsolete" strikes fear in the hearts of many who have spent their hard-earned cash on the latest technical wizardry. Today's tools become tomorrow's toys, so they say. Computers come and go, like the rising and setting of the sun. The pace seems to have quickened with the advent of Intel's latest processor, the 80486. Is there an intelligent way of dealing with this after your all-time favorite computer has been removed from the official price list?

When you've come to the realization you and your Portable Plus are a little out of style and all alone, take a good look around. Look at the response of professional photographers, for instance. These hard working folks depend upon their cameras and their creativity to earn them a living. The marriage of computers and cameras was a blessing and a curse, because in spite of promoting equipment with many new features, it accelerated the rate of obsolescence. Their market has been around for many years, and it seems there are three kinds of photographers: those who can afford to use the latest, those who are always wanting to use the latest, and those who prefer not to. Now I won't belabor the point, but those plastic-bodied electronic marvels aren't worth much in the cold, or when the battery dies. You can't use them as hammers for driving tent pegs. They do offer a level of automation and precision unknown to their earlier counterparts, but old cameras still feel good in the right hands, and are every bit as useful.

Good tools are always good tools. The Portable Plus falls into that category. It's a rugged tool that still has a place in the world, like all those old cameras that refuse retirement, being both used and cherished by their owners. I recently got back my Plus from a student who was learning the 'C' programming language. Not having seen the Plus for nearly four months, I marvelled over the rugged construction, display quality and computing power, even though mine is over five years old. We've seen a lot of projects together, and we know each other quite well. As a programmer I can testify that the beauty is more than skin deep.

Conform or rebel, it's your choice. Do a little of both to make life exciting. Choose your tools, and get to know

them well. Forget about silly corporate price lists and enjoy what good things you do have. Pick up your Plus and notice how good it feels. Try your hand at some programming, and experience the joy of teaching your old friend something new.

What does "obsolete" mean, anyway?

### LZEXE A "MUST HAVE"

**110**  
**P+**  
**PV**  
**LS/12**

During the past two months we uncovered a software gem that dramatically extends the useability of your precious RAM or hard disk space. It shrinks the size of your program (COM or EXE) files up to 65% of their original size, yet keeps them executable.

LZEXE is a freeware program developed in France by Fabrice Bellard which compresses EXE and COM files by the Lempel-Ziv technique. What's exciting about this program is that the compressed programs are still directly executable from DOS. You don't have to extract them from an archive in order to run them, nor do you need a separate decompression program. Just type the name of the program, and you're up and running.

LZEXE combines several existing concepts into a single unifying process. When you compress an EXE file, LZEXE optimizes the program's relocation table, compresses the executable code, and appends a tiny (330 bytes) decompressor to the end of the file. When you execute your program, the decompressor unpacks the EXE file to full size in RAM.

I tested the effectiveness of LZEXE on some Portable PLUS software that I frequently use. The compression seems to be most effective on programs that were compiled using Microsoft programming languages. Programs compiled under Turbo Pascal 3.0 are also compressed, but the results are not as dramatic. Results for LZEXE and SCRNCN, another file compression program, are listed below.

The average compression for LZEXE is about 30%, for a combination of Microsoft and Borland-compiled programs. Not bad for a 12k utility! Of the software compressed, FilePlus yielded the most significant compression. The results also indicate that the larger the executable program, the better the compression.

There is both good and bad news with LZEXE. The good news is that if you compress a program that runs on the Plus, the compressed version will also run on the Plus. The bad news is that LZEXE itself does not run on the Plus (you have to compress the files on a PC) and there are some files that cannot be compressed with LZEXE.EXE. If

**Charge**  
**your Portable**  
**(and HP9114)**  
**off your car's**  
**cigarette**  
**lighter!**

It's the Mobile Ni-Cad Recharger (MNR-2) from S.O.S., and it couldn't be easier to use: simply plug one end into your car's cigarette lighter and the other into your Portable, Portable Plus, HP9114, or ThinkJet.\*

The time it takes to charge a given unit is about 30% longer than with a wall charger. Your car does not have to be running—the unit can operate overnight with no danger of running down a normal car battery.

Mobile Recharger ..... \$69.95  
Portable Paper subscriber price ..... \$59.95  
PRODUCT NO. PR11NM

\* Also works with HP41C/CV/CX, HP71B, and HP75C/D hand-helds; HP82143 and HP82162 printer/plotters; HP82161 cassette drive; and rechargeable reserve battery packs for all these devices.

# Speed up your Portable Plus

## At least 60% faster with our low-cost "FastPlus" upgrade!

By installing a faster processor and increasing the clock speed of your Portable Plus, you can run Lotus 1-2-3 and other applications at least 60% faster than before.

The upgrade is straightforward, but requires skill and experience working inside a Portable Plus.

If you want to try it yourself, see our instructions in *The Portable Paper* Vol. 3, No. 1, pp. 12-14.

If you want our trained technicians to do it for you, call to schedule an appointment, then send us your Portable Plus and \$250.

(This covers the cost of de-soldering the Harris 80C86 processor and replacing it with the faster NEC V30, increasing the clock speed from 5.33 MHz to 8 MHz, and

returning your computer to you via UPS surface. If you prefer overnight return shipping, add \$35.)

In most cases, we'll perform the upgrade and ship your computer back the same day we receive it. In all cases, we guarantee our work for 60 days.

*Please note: This upgrade will void your HP warranty, and HP will be under no obligation to service your Portable Plus in the future. However, we will continue to service upgraded machines, and HP repair centers may, in fact, do the same.*

This "FastPlus" upgrade will make your Portable Plus more than twice as fast as the original IBM PC—that's even faster than the HP Portable Vectra!

To save time running your spreadsheets, editing your documents, loading programs, saving files, and almost anything else you use a computer for, order the "FastPlus" upgrade today. You'll appreciate the difference it makes!

**"FastPlus" upgrade for Portable Plus . . . . . \$199**  
PRODUCT NO. FAH19G  
(Be sure to call first to schedule an appointment.)

**Overnight return shipping . . \$35.**

you'd like to see this utility run on the Plus, drop Hal Goldstein a note. If there is sufficient interest in the conversion, I will contact the author and see what he can do for us. Even if you have to rely on an IBM-compatible to 'LZ' your files, this utility is absolutely a "must-have!"

### MORE GOOD NEWS

Hal Goldstein recently sent me another file compression utility that works very much like LZEXE, but also runs on the Portable Plus. **SCRNCH** achieves compression performance that is comparable with LZEXE, and is very easy to use. As a comparison, I used **SCRNCH** to compress many of the same programs compressed with LZEXE. The results of both compression utilities are listed on the next page:

Compressing Files  
Using LZEXE and SCRNC

FILE NAME (Description)	Size Before	Size after compression/ Compression rate	
		LZEXE	SCRNC
HPR.COM (Hprint)	50,189	31,531/ 37.2%	31,233/ 37.7%
HPRUTIL.COM (Hprint utility)	25,678	17,947/ 30.1%	na
TJIL.COM (Hprint utility)	13,253	10,955/ 17.3%	10,517/ 20.6%
PRNTALK.COM (PrinterTalk)	39,588	28,795/ 27.3%	na
SK.COM (Sketch)	43,523	26,523/ 39.1%	25,904/ 40.4%
LOADFONT.COM (Sketch utility)	12,730	10,395/ 18.3%	9,950/ 24.9%

GSPLUS.COM (Sketch utility)	13,050	10,843/ 16.9%	10,415/ 20.2%
TP.EXE (TermPlus)	29,922	19,201/ 35.8%	15,269/ 38.1%
FMT.EXE (FormatPlus)	61,428	34,210/ 44.3%	34,917/ 43.2%
EDPLUS.EXE (The Editor II)	38,760	22,843/ 40.9%	23,368/ 39.7%
FILEPLUS.EXE (FilePlus)	62,601	21,655/ 65.1%	22,005/ 64.8%

It seems that **SCRNC** works better on the COM files produced by Turbo Pascal (i.e., HPR, SK, LOADFONT, TJIL, GSPLUS) than on the ones produced by the Datalight (TP.COM, v1.2) or Microsoft (EDPLUS, FMT, FILEPLUS) language compilers. Even though there seems to be a size advantage with **SCRNC**, it is negated by the minimum DOS allocation unit (512 bytes) for the Portable Plus.

As with LZEXE, there are some disadvantages to using **SCRNC**. First, it takes significantly longer to **SCRNC** an executable file. Second, when the **SCRNC**-ed file is loaded, there is an appreciable delay decompressing and starting your program. Unlike LZEXE, **SCRNC** works on the Portable Plus without modification, whereas LZEXE presently runs on true IBM compatibles only.

I liked both LZEXE and **SCRNC**. If I had access to an IBM compatible, I would most likely choose LZEXE. It would be very easy to compress my favorite programs on the compatible and then transfer them back to the Plus. On the other hand, if all I had was the Portable Plus and I was interested in conserving disk space, the minor inconveniences of **SCRNC** could be overlooked.

*[David is a service engineer for computer power systems for KW Control Systems of Middletown, New York, and a long-time contributor to The Portable Paper.]* ■

(110% continued from page 13.)

## HP-110 Power

By Thomas Morgan

### 110 GETTING A PC-AT TO READ HP FORMIBM DISKS

Several weeks ago, I talked to you about problems using FORMIBM formatted files on an external drive attached to a PC-AT with a bridge. (FORMIBM, found on the 1988 Subscribers Disk, formats 3.5 inch disks from the HP-110 and Portable Plus such that an IBM PC and the HP Portables can read them.) I had tried using READHP and that didn't work. Since then I have been trying a number of ways to get the PC-AT to read HP discs. Using Norton Utilities, I found that the only real difference between the disks that the PC-AT would read and the FORMIBM disks, was the root directory capacity of 176 vs 112.

Using DEBUG on FORMIBM.COM to edit byte 4C2 from BO to 70 made the program format disks so they could be used interchangeably with HP-110/HP9114, HP150, PC-AT with a bridge attached external drive and PC-AT with a normal internal drive.

This led me to looking for a way to provide the same formatting capability on the PC-AT (bridge) and on the HP150. I haven't yet found a solution for the HP150 but the PC-AT solution I found is on the following page. A batch process was installed in the menu (a batch file could have been used) consisting of:

```
FORMAT D:(D: is the 3.5" drive)
DEBUG <FORMIBM7
```

FORMIBM7 is a debug script as follows:

```
L100 3 0 1          (3 is for D:)
F100 300 00
F100 10F ED 1C 90 48 50 31 31 30 20 20 20 00 02 02 01 00
F110 11F 02 70 00 A0 05 F9 03 00 09 00 02 00 00 00 EA 00
F121 122 FF
F1F0 1F7 A8 0E 03 07 2B 15 34 3E
W100 3 0 1          (3 is for D:)
Q
```

This solution uses the standard DOS FORMAT.COM for the initial formatting, and debug to change the boot record to match that provided by the revised FORMIBM.COM. The disks formatted with this system work well on all four computers mentioned above, even though the initial fill characters in the directory and data areas were not the same.

### USING VIDEO DISPLAY EDITOR ON THE 110

The Video Display Editor (VDE) on the 1990 Subscribers Disk is a useful program, but for use on the 110 it requires the turning on of the ALT mode before loading the program, and the turning on of the HP mode after exiting. While this can be done with a batch file, I decided to patch my copy so the mode changing would be done as part of the program.

Turning on the ALT mode at the beginning of the program proved simple, but due to the many pushes and pops of the segment registers, I was unable to find the correct address for the escape codes I stored for returning to the HP mode. The alternative I used was to send the escape code one byte at a time using INT 21, Function 2 repeatedly.

Patch VDE.COM by renaming VDE.COM to VDE and then execute DEBUG VDE. Edit the following bytes to read as shown in the box below. After you have edited the bytes, rename VDE to VDE.COM and you should be set.

### ADDITIONAL POINTS ON SUBSCRIBERS DISKS

- 1988 Subscribers Disk -- ARCE.EXE is actually ARCE.COM. CLOCKPRG hangs the 110 up, and STK works on the 110.
- 1989 Subscribers Disk -- CAL hangs up the 110, and YAMS doesn't work. Main memory must be set for 164K for SWP to work.
- 1990 Subscribers Disk -- MJOG doesn't seem to work on the 110.

#### Patch for VDE.COM

(so it can be used with the HP-110)

- To patch VDE.COM, rename VDE.COM to VDE and execute DEBUG VDE.
- Edit bytes indicated below to read as shown.
- Rename VDE to VDE.COM.

```
-e300          (through 31B)
xxxx:0300  BA F6 62 B4 09 CD 21 90-90 90 90 90 90 90 90 90 :vb4.M!.....
xxxx:0310  90 90 90 90 90 90 90 90-90 90 90 90 BB EE 07 B4 .....;n.4

-e7EA          (through 7ED)
xxxx:07E0  21 45 EB 06 BB 82 07 E8-D7 42 E9 EF 5C 90 21 BB :Ek;..hWBio\!8

-e64a0         (through 64FF)
xxxx:64A0  2E 0D 80 1D FF 01 5B 50-72 65 73 73 20 45 53 43 .....[Press ESC
xxxx:64B0  20 74 6F 20 63 6F 6E 74-69 6E 75 65 5D FF 02 20 .....to continue]..
xxxx:64C0  20 20 20 20 20 20 20 20-20 20 20 20 20 20 20 .....4.2.
xxxx:64D0  20 20 20 20 20 20 20 20-20 20 0D 00 B4 02 B2 1B .....
xxxx:64E0  CD 21 B2 26 CD 21 B2 6B-CD 21 B2 30 CD 21 B2 5C M!2&M!2kM!20M!2\
xxxx:64F0  CD 21 B4 4C CD 21 1B 26-6B 31 5C 1B 2A 64 4B 24 M!4LM!&k1\*dK$

-w
-q
```

## STRENGTHS OF THE HP-110

I'm really sold on the HP-110. I bought my first one when they first came out and have been using it regularly ever since. I have looked at many other portables since, and haven't found one that didn't have drawbacks when compared to the HP-110, so I purchased two more.

- **Versatility** -- Ninety-five percent of a computer's use by most non-data processing professionals involves preparing short letters/memos and performing some type of listing and mathematical analysis of data. The built-in Memomaker and Lotus programs in the HP-110 serve these purposes well.
- **Learning Ease** -- With the ROM software in the HP-110, new users are relieved of the worry of deleting programs. This is a concern that inhibits learning because of the fear of making a mistake. Memomaker is so easy to use that a person can use it readily in a very short time. The Lotus manual that comes with the HP-110 is much better than the one that comes with Louts 2.01. Also the instantaneous help screens make learning Lotus easier.
- **Ruggedness** -- The disk drives included in other portables, particularly hard drives, won't take much abuse. With the HP-110 you don't have to take the disk drive with you as there is usually enough space on the RAM disk for several days work.
- **Connectability** -- You can connect into any PC with a serial port to use its disk drive. You can also connect to other computers and bulletin boards through the internal modem. I have downloaded material from the University of California INFOTAP (a free service) and from our HP3000.
- **Compatibility** -- While not IBM-PC compatible, the HP-110 is fully MS-DOS compatible, giving access to many shareware programs using DEBUG and search for INT 10 (CD 10), which immediately indicates incompatibility.
- **Speed** -- Lotus and Memomaker are ready to use within about two seconds of turning on the HP-110, where, even on the PC-ATs, booting up and loading Lotus or a word processor takes about 30 seconds. The RAM disk allows very fast loading of files into Memomaker and Lotus.
- **Space** -- The small size of the HP-110 leaves room to work on the desk and is also easily removable when not needed. It can also be secured by locking in a file drawer when not in use.
- **Screen** -- The one objection I hear is screen size and visibility. I have to work a little smarter to make a Lotus spreadsheet appear neatly in the 11 lines available, but this has caused no real problem and sometime has been a virtue. I find visibility for the user good but it is hard for someone to look over your shoulder and see the screen at the same time. This is both a minus and a plus. The LCD screen never bothers your eyes the way a CRT does when you use it for long periods.

- **Programming** -- BASIC and Assembly languages allow the preparation of specialized programs when desired, but there are not many things where Lotus macros won't do a pretty good job. The programming language capabilities are ideal for learning programming and for doing fun things beyond day-to-day needs.

The HP-110 is a professionally designed, high-standard instrument that is ideal for use by managers and professionals for daily use at their desks, and also particularly for learning to use a computer. You can tell from the above that I continue to be impressed with the HP-110.

*[Tom Morgan is civil engineer in Ventura, California, and an avid HP-110 proponent. We will publish more of Tom's insights in future issues.]* ■

## Noise Buster

As I have complained in these pages, I have had difficulty using our local phone lines with my HP-110, HP Portable Plus, and HP Vectra CS built-in modem. I have wasted untold hours and dollars calling long distance to Compu-Serve in Des Moines and Kansas City. Noise on the lines has interfered with many a communications session.

Several months ago I found an inexpensive solution that solves the problems about 95% of the time, called Noise Buster. Noise Buster is a small square white plastic device. Instead of plugging my RJ-11 phone plug into my HP Portable modem, I plug it into Noise Buster. Then I use the phone wire and RJ-11 plug built into the Noise Buster to connect to my internal modem. This solution has greatly reduced my frustration level. Further, the way I have my Portable Vectra set up at home, it is actually more convenient to plug my phone cord into Noise Buster rather than have to mess with the rear of my Vectra.

The Noise Buster can be connected to Modem or FAX or to surge protector. The Noise Buster has been pre-adjusted at the factory to a level that's best for most users. If you need to modify the filter level, use a small flat-tip screwdriver to turn the adjustment screw located next to where the cord comes out of the case. Counter-clockwise increases, and clockwise decreases the filter level of Noise Buster. A small turn in either direction is all that is usually necessary.

## ORDERING INFORMATION

Noise Buster is manufactured by an organization for the handicapped and marketed through IBC, 10220 Ridgewood Drive, El Paso, Texas, 79925. It retails for \$22.45 and can be purchased from IBC by calling 915-595-1199. ■

## LetterPerfect, Scaled-Down Version of WordPerfect 5.1

WordPerfect just announced that it is working on a smaller word processor for laptop users, and those who do not need a full-featured word processor. LetterPerfect will produce WordPerfect 5.1-compatible files and include many

of 5.1's features (font support, graphics, pull-down menus, mouse support).

**P+** LetterPerfect's focus is smaller documents. It lacks the indexing and table-generating features needed for larger documents. The program does not support footnotes at the bottom of the page, but will place them as endnotes.

**LS/12** Existing users of WordPerfect will have no problem adapting to LetterPerfect. The menu structure will be similar, but fewer features will mean simpler menus. Letter Perfect users will be able to call up and save WordPerfect documents, and vice versa. If a WordPerfect 5.1 document uses features not supported by LetterPerfect, the smaller program skips over the information, but leaves it intact for use with WordPerfect 5.1.

No release date has been announced for the \$229 product that should help WordPerfect gain a foothold in the lower-end segment of the word processing market. As soon as we can get a hold of a beta test version of the product, we will test it with the HP Portable Plus and HP150. Hopefully, we will be able to make it work and put it in ROM for the Portable Plus. It could be an ideal product for the Portable Plus. ■

## **110** Diet Program for 110 and PCs

**P+** By Bill Pinnick

**PV** I recently went on a diet to lose a few extra pounds that I had accumulated over the past several years. I was given a plethora of information from several sources to help me in this endeavor. I have taken that information and condensed it into a single computer program which may be of some help to others. To make it as widely useful as possible I have developed two versions for distribution as ShareWare.

These two programs (one for IBM and compatibles, and one especially for the HP-110) represent help for anyone who has trouble reaching or maintaining their desired weight. Given a few simple measurements, they will tell what one's ideal weight should be, compute one's basal metabolism rate, and show the effect of different activity levels on one's caloric needs. Once this is determined, the program can then estimate the number of calories needed per day to lose (or gain) weight at the rate desired. The programs include options for operation in either English or metric units.

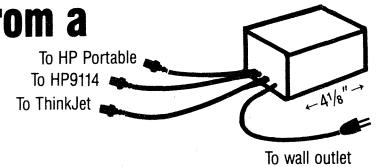
My biggest problem was the out-of-town trips that disturbed my exercise program and left me eating rich restaurant foods. With the program I can easily determine the effect of a varying daily routine on my caloric needs, and therefore adjust my intake accordingly, whether I am able to exercise or not.

Anyone interested can obtain copies of the programs by sending a formatted disk and a self-addressed postage paid mailer to my address listed.

Bill Pinnick  
Chem-micro-Metrics  
1689 Scarborough Road  
Greenville, NC 27858

I am asking a nominal charge of \$10.00 for those who find the program useful and therefore wish to register their ShareWare copy. ■

## Power your Portable, ThinkJet, and HP9114 from a single wall outlet.



Can't plug your Portable, ThinkJet, HP9114, and HP hand-held into the same wall outlet because the recharger cubes are too big? Here's the solution:

The Power Cube/Recharger from Personalized Software.

The Power Cube has four power cords. Three are HP cords that plug into your HP Portable, ThinkJet, HP9114 disk drive(s), or HP hand-held (HP41, 71, 75, series 80, etc.).

The fourth is a conventional AC cord that plugs into the wall and powers the other three.

Get rid of that tangle of extension cords, power strips, or whatever else you've been putting up with.

Order a Power Cube/Recharger today.

Power Cube/Recharger ..... \$89.95  
\$79.95 for Portable Paper subscribers.

(C) Copyright 1987 Personalized Software

## New HP Business Calculator

**110** Hewlett-Packard has introduced the HP Business Consultant II (HP 19BII), their top-of-the-line financial calculator. **P+** The Business Consultant uses HP Solve, which allows the user to enter custom equations without using keystroke programming. **PV** It can store and sort names, phone numbers, and addresses. **LS/12** Menus and prompts are available in six built-in languages, and the calculator operates in reverse Polish notation or algebraic-entry mode.

The Business Consultant features graphics capabilities including scatter diagrams, histograms, curve fits and net present value vs. cost of capital. The Business Consultant can do cash-flow analysis (IRR, NPV, NFV, NUS) with multiple cash-flow lists in RAM. List-based statistics and forecasting are also featured, with mean, median, standard deviation, curve fits, and running totals for number lists and lists labels. Also included is a time management feature which has an appointment menu with clock and alarms.

The Consultant II has a four-line, 23-character dot-matrix liquid crystal display and carries an infrared printer interface. It has a 128K-byte ROM and 6.5K-byte RAM memory. Its dimensions are 7.5 x 6.3 x 0.5 inches, and it is powered by three replaceable N-cell batteries.

The list price of the HP 19BII is \$175. ■

## Auto-Pro Workstation and Other "Platforms" for Your Portable

*Do you have an organized work space for your HP Portable when you bring it into the office, take it home, or travel with it in the car? If not, you may want to look at these "platforms" developed by Mead-Hatcher.*

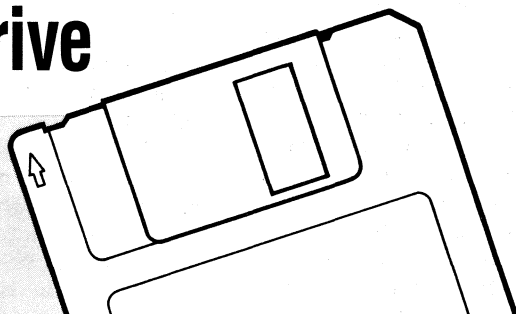
By Richard Hall

For a growing number of professionals, their portable computer is their only computer. With the advent of fast portables with hard and floppy drives (like the LS/12), the additional desktop became unnecessary. You may keep an external monitor in the office and an extra printer at home, but you can carry with you all the power and flexibility you practically need.



# Now you can use HP Portable or HP150 disks (single or double sided) in a 3½" IBM compatible disk drive

**Volume  
Pricing  
Available**



Even though your HP Portable/HP150 and the new IBM compatible computers both use 3½" disks, the disks are incompatible—HP disks can't be used in IBM machines.

**ReadHP**, a "device driver" program developed by Personalized Software, solves the problem.

ReadHP installs in an IBM PC or compatible in minutes, and is a cinch to use: You simply place a 3½" HP disk (single or double sided) in the PC's disk drive, and press a few keys. Voila! The PC can read and write to the disk directly—without losing the ability to read and write to IBM disks.

Want to share your WordPerfect, Lotus, or other files between your HP Portable/HP150 and an IBM compatible with a 3½" disk drive? It's simple: Order ReadHP today.

**ReadHP** ..... \$79.95  
**Portable Paper subscriber price** ..... \$69.95

PRODUCT NO. RD11NS

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See order form for details.

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Use enclosed postage-paid order form or send check or credit card information (#, exp. date, signature) to:  
**Personalized Software**  
P.O. Box 869, Fairfield, IA 52556 515 472-6330

## RECOMMENDED FOR:

HP110 Portable	●
Portable Plus	●
Portable Vectra	●
HP150	●
IBM PC and compat.	●

One of the nice things about this arrangement is that you don't have another computer taking up space on your office desk. On the other hand, there may be no organized place to put your laptop when you need to use it.

## ORGANIZED, STABLE "PLATFORMS"

Mead-Hatcher's products attempt to organize space for your laptop. Described below are a number of their products.

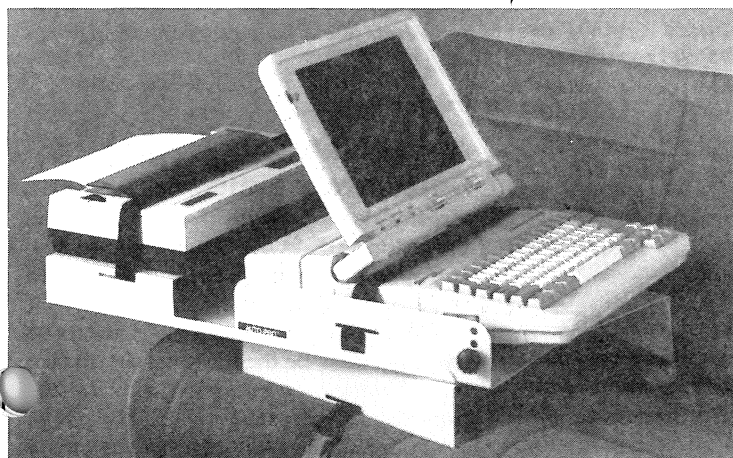
- **The Auto-Pro Workstation** -- mounts easily and securely on all front passenger seats, bucket or bench style. It accommodates a wide range of laptop computers (up to 14" wide) and can be adjusted to put the laptop in a comfortable use position.
- **Auto-Pro Printer Platform** -- attaches to the Auto-Pro above and provides a platform for a small printer (like the Diconix or ThinkJet printers). Cut sheet or continuous paper can be stored under the elevated platform.

- **Laptop Carrel** -- elevates a standard monitor six inches off a desk work surface to allow the screen to be seen above the laptop. When the laptop is not in use, it can be stored under the carrel. The unit accommodates laptops with flat-folding CRT screens (like the LS/12) to hide under the carrel. It will also accommodate an 80-column backfeed printer.
- **Laptop Hide-A-Board** -- elevates a standard monitor six inches to a comfortable viewing height. The monitor sits on top of a drawer on which rests the laptop. The drawer's 4.75" clearance allows a flat-folding laptop screen to hide under the monitor.
- **Laptop Drawer** -- is designed to mount under a 29" or higher desk. The 15.5" wide by 16" deep by 4.75" high drawer slides out on steel ball bearing slides, extends ten inches beyond the work surface, and accommodates a wide variety of laptop computer models. It allows you to store the laptop out of the way under the desk surface when not in use.

## ORDERING INFORMATION

All products described in this article were developed by Mead-Hatcher, P.O. Box 861, Buffalo, NY. 14240-0861. Phone: 716-877-1185, Fax: 716-877-7381. Retail prices are listed below.

Product	Retail price
Auto-Pro Workstation	\$99.95
Auto-Pro Printer Platform	\$34.95
Laptop Carrel	\$29.95
Laptop Hide-A-Board	\$89.95
Laptop Drawer	\$59.95



Auto-Pro with Printer Platform

(Letters continued from page 5.)

## Problems with Plus Communications Outside U.S.A.

**P+** Since I only have an HP-110, and not a Plus, I have no way of determining if these utilities will even run on a Portable Plus. It's probably worth a try by you.

For the what it's worth department, I have decided to purchase Xtree Pro Gold (an updated version of Xtree) for my own use. There were only three things, that I want, missing from Xtree: dual directories, built-in text editor and changing file dates and times. Xtree Pro Gold has dual directories and a text editor. It may also change file dates and times, but since I haven't received it yet, I don't know if it does.

**Keith Schaefer**  
**Venery Groups Limited**  
 P.O. Box 370  
 Nassau, NY 12123

*[XTREE seems like it will work for the first screen or so, but then it locks up. We haven't tried River Shell. See this issue's Looking Glass column for a write-up of another shell that works on the Plus -- Hal.]*

## Wants to Donate Plus

**110** **P+** **PV** **LS/12** I have graduated to a Zeos 386SX and would like to donate my HP Portable Plus computer to some charitable organization, with your help. I am willing to ship the complete outfit to you at my expense for your examination and correction of any problems.

The outfit consists of the Plus itself, with a new lead acid battery, three disk drives, one A model and two B models, with four extra batteries, and a ThinkJet Printer with an extra battery, and all the necessary cables.

Are you willing to handle this matter for me, and to see to any repairs that are necessary, at my expense? All that I would want is that I could deduct the actual value of the complete outfit from my income tax. I would refund any expenses you might encounter.

**Gilbert M Halpren, MD**  
 Honolulu, HI 96813

*[Please, do NOT contact Dr. Halpren as he has donated his Plus. We, at Personalized Software, have a favorite local university and other non-profit entities to which we contribute. If any reader wants to donate his equipment, we would feel good about being intermediaries and not charge for the service -- Hal.]*

**110** **P+** **PV** **LS/12** My previous letters have, among other things, dwelt on the problems of having other than the U.S. version of the Plus and I am afraid this theme is continued. My last letter (Vol.4, No.5, Pg.43) has met with resounding silence with regard to Visicalc/Lotus123 file conversion. Also, your encouraging reply regarding chess for the Plus is so far unfulfilled.

The problems of communication for the Plus outside the US remain unresolved, and having tried Reflections without success I had great hopes for PPTERM on the 1988 subscribers disk. Imagine if you can the frustration felt when on invoking this program up comes the message "FATAL DISC ERROR". The accompanying documentation gives no indication as to what this could mean. Also the documentation refers to a problem requiring the DATACOM setting to be 7 bits, even parity. Do you have any explanations, ideas, answers here?

I recently discovered a Lotus 123 worksheet named biorhythm.wks, which you included without publicity or documentation on your HP-110 Time Manager disk. It is an excellent and easy-to-use offering by Cliff Looyenga, but not being a 123 buff I wonder if Cliff can offer a way to input the subject's name and relevant dates? There appears to be provision for this within the wks. For those using PGRAPH to print a full-sized output to the ThinkJet or QuietJet, the width setting needs to be reduced to 6.00 to get a full printout. The PGRAPH, SETTINGS, HARDWARE, PRINTER menu does not include the QuietJet, but the ThinkJet options work adequately.

**Colin J. Crowther**  
 19 Ellerby St  
 Fulham, London SW6 6EX  
 ENGLAND

*[We recently introduced GamesPlus for the Portable Plus - \$69.95 to subscribers. GamesPlus includes chess, bridge, go-moku, othello, Yahtzee, and six other games. As for the rest of your questions ... more silence. Can anyone help? -- Hal]*

## Needs MS Word, Version 5, On the HP 150

Thank you for sending me information about your products during the past two years. Please find enclosed a money order in payment for a one (1) year subscription to the Portable Paper.

**P+** You have been offering a recent version of WordPerfect for the HP-150 and Portable Plus; but what I really need is a current version (version 5) of MS Word! Is there any chance that you will be offering a customized HP-150 and/or Portable Plus version of MS Word? You see, I have been using it for so long it has become second nature to me. I don't want to change to another word processing system. Besides I think Word is a superior word processing system. Can you help me on this? I would love to have the features of Word v.5 or maybe even the Windows version. Mouse capability would be good also. (I have HPMouse with my HP-150.)

Like a lot of your customers I don't want to abandon my HP-150 or my Portable Plus. I'm angry with Hewlett-Packard for setting adrift loyal HP-150 and Portable Plus users. Support for these computers in Canada is almost non-existent. There is absolutely nothing wrong with my HP-150. I'm sure it will last another 10 years and the Portable Plus is, as you say, ahead of its time in many respects. The problem is of course this compatibility business.

As a writer, word processing is my main software application. I am sure there are many other 150 and Portable owners like me who swear by MS Word. I for one would be willing to pay a premium price for a customized version if it would mean avoiding purchasing all new hardware. If you can help us out on the MS Word matter, it would be much appreciated.

**James F. Follwell**  
**Susanatek Consulting & Investment Corp**  
 P.O. Box 3165  
 Charlottetown, PEI  
 C1A 7N9  
 CANADA

*[As mentioned in this issue's 110% column, there is hope for MSWord, but no promises. We'll keep everyone informed - Hal.]*

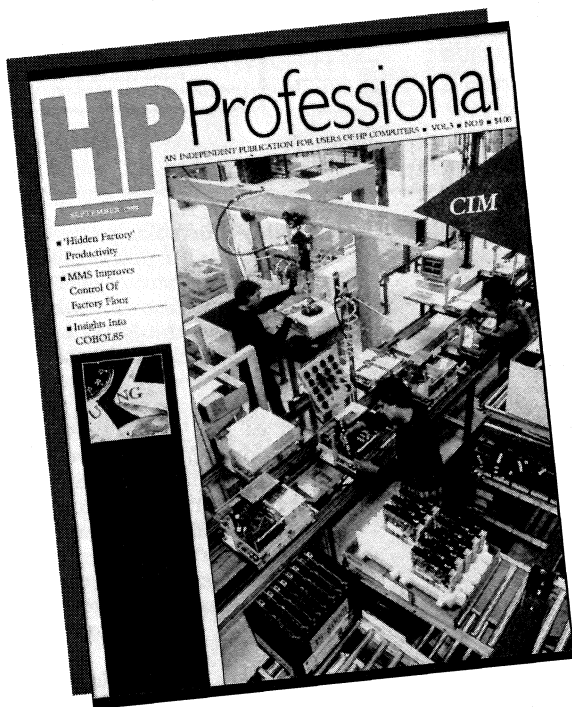
## Appreciates Personalized Software's Help

**110** **P+** **PV** **LS/12** I really do appreciate that you sent me the 2 floppy disks some time ago. In fact, I've appreciated all the help I've received so far...from both Vicki and David.

Whenever I call, everyone is always so friendly...must be the midwest air! In fact, your kindness is exceeded only by the expertise of your staff.

Your valuable help has gotten me off to a good start in the PC world, where I

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If you're a Hewlett-Packard computer user, and buyer of HP-related hardware, software, or peripherals, HP Professional, the monthly magazine for Hewlett-Packard commercial and technical computing, is for you. It's a free source of valuable information that will help you do your job.

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Or call Lori Ulbrich at (215) 957-1500, or FAX (215) 957-1050.

# At last! EASY TO USE COMMUNICATIONS SOFTWARE

## for the HP110 and Portable Plus

HP110 users: Tired of struggling with the built-in Terminal program?

Portable Plus users: Is PC2622 or Reflection too complex for your needs?

In either case we have good news: two of the easiest-to-use communications programs we've ever seen.

Term110 was developed by Cliff Looyenga, who writes the "Wizardry" column for The Portable Paper. It runs on the HP110.

TermPlus was developed by Portable Paper contributor David Hughes from an earlier

prototype. It runs on the Portable Plus.

Both programs allow you to:

- Send and capture ASCII information;
- Quickly send programs, Lotus worksheets, and archive files via the XMODEM protocol;
- Log onto electronic bulletin boards and remote computers automatically;
- Store and access directories of phone numbers;
- Run other programs without severing the phone connection.

Both programs have on-line help, and use around 25K of electronic disk space.

Most importantly, both programs make efficient, logical use of function keys and menus to make the job of transferring files and programs *easy*.

You won't appreciate *how* easy until you try Term110 or TermPlus for yourself. We invite you to do so today at our risk.

Term110 (for HP110) or  
TermPlus (for Portable Plus) ..... \$99.95  
(Specify which program when you order)  
Portable Paper subscriber price ..... \$79.95

RECOMMENDED FOR:	Term110	TermPlus
HP110 Portable <sup>+</sup>	•	
Portable Plus		•
Portable Vectra		
HP150		
IBM PC and compat.		
Available on ROM Backup for the Portable Plus*		

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P.O. Box 809, Fairfield, IA 52556 515-472-6330

\*ROM backup of TermPlus includes IBM disk formatting utility, ThinkJet control pop-up, and more.

had once merely stuck a few toes and have now plunged head-first!

My thanks again...keep up the good work!

**Sally J. Harris**  
Garden Gate Natural Foods  
17 South 9th St.  
Allentown, PA 18102

## Likes His New 110

I am enjoying my "new" used HP-110 Computer immensely. It is a fantastic machine with fantastic software.

In closing, I would like to say it has been a pleasure dealing with your sales personnel and I'm glad I discovered Personalized Software, Inc.

**Ralph W. Johnson**  
4409 Columbus Trail  
Ft Worth, TX 76133

## Prompt Service

Thank you very much for such prompt service! Thanks to Personalized Software for a vital operation!

**Ray Michell**  
KB - Aerotech  
P.O. Box 350  
Lewistown, PA 17044

## Commendations for Ethics

Thank you for your phone call today. Your company is to be commended for its ethics and policies.

**W. B. Camp, Jr.**  
Eclectic Associates, Inc  
1021 West Bastanchury Road  
Suite 120  
Fullerton, CA 92633

## Help With Subscribers Disk

I just received your back issues and the Portable Paper Subscribers disks for 1988, 89 and 90. It does indeed make interesting reading for someone new to the Laptops. But that is my problem, so perhaps you can give me a step-through guide on how to get the files from your disks.

I have been using an HP 75C since 1982 so have had to work with limited memory and create everything I use in BASIC. My new HP LS/12 is my first system using DOS, so I am a complete novice in this. I have managed to wade through the books on LOTUS and WORDPERFECT 5.0 (now upgraded to 5.1) and am up to steam on what I want to do with those programs. But after two months I am not yet at ease with all the mysteries of DOS commands. So perhaps you can help me by stepping through one program on your 1989 Subscribers Disk.

When I type A:> COPY ARCE.COM from the C prompt and press ENTER I can copy that program from your disk to mine.

With C: ARCE.COM [ENTER] I get that program to come on, but am totally at a loss as to what it is telling me. I thought perhaps there were instructions on that to "decompress" the other files on the disk. There well may be but I got lost.

When I do A:> COPY AREACODE or BOX, I get "no files found".

So what are the steps to make the Area Code or cursor box work? Does the BOX program make the cursor larger on command in LOTUS, WORDPERFECT or some other programs I have?

As I said I am new to DOS, but have worked in BASIC for some years on my Hp 75C. Now there is a REALLY portable computer which I have used all over the Pacific Ocean on research ships, and uninhabited islands. And it is still going

strong. My little solar panel keeps up the batteries in remote places, and my universal charger takes care of every where else.

I notice mention of an HP-IL card. I gather it allows the LS/12 to operate my HP-IL equipment. Is this so? Is there a conversion device, program, or whatever which would allow me to read my BASIC data off of my 9114 (1984 model) disk drive? I would like to convert some of my archival data into a LOTUS format. I can do this by hand for hard copies, but obviously would rather not, hence some sort of BASIC to LOTUS conversion is needed.

Thanks again for your interesting paper, I am glad I subscribed.

**Daniel M. Brown**  
3838 Milan St  
San Diego, CA 92107

[Sorry for the difficulty with our subscribers disks. Any reader who cannot make heads or tails of how to use the disks, give us a call and David or Steve will help you.]

I suggest to any somewhat serious computer user a book on MSDOS from your local book store. MSDOS is the backbone of any HP Portable or IBM compatible system.

From PAM or MSDOS be sure to add C: to your copy command. So to copy ARC.COM, type COPY C:ARC.COM and press RETURN. Also, don't forget the file extension. To copy the AREACODE program, type COPY C:AREACODE.ARC and press RETURN.

The BOX program was written for the Portable Vectra and is not very robust. I suggest NoSquint which you can buy from us for \$37.95.

There is no way that I know to operate HP-IL equipment from the LS/12. The IBM PC HP-IL card does not work in the LS/12 expansion chassis -- Hal.]

## User Upgrades to a Plus -- and Loves It!

Just received my Portable Plus ROM upgrade to LOTUS 123 v.2.01. It's great, now I don't have to translate back down to version 1.A whenever I work on my desktop.

I'm really enjoying the expanded RAM which the Plus has over my old HP-110. I was always writing bigger Lotus programs than the 110 could handle. If you remember, I was the one that "successfully" unloaded my ROM on the HP-110 -- of course I don't know how I did it and therefore now all I have to show for it is a "Dead" 110. Of course after 6 years of faithful service, I can't complain.

In my business, I travel all over the country and my Portable Plus with disk drive and printer go everywhere I do. The long hours of airline travel would "waste" most portable computer batteries but not so with my HP Plus -- it takes a lick'n and keeps on click'n.

Keep the good articles coming in *The Portable Paper*, I enjoy reading them as much as Popular Mechanic's and my Guns and Ammo magazine.

Please thank everyone that assisted us in getting my order back to me so fast. I liked your stamp on the UPS box that read "This Package Shipped Within 48 Hours of Receipt of Your Order". Very impressive -- keep up the good work.

**W. S. Wagner, Jr.**  
1122 Ashley Forest Drive  
Alpharetta, GA 30201

## ROM for Reflection

This letter is to express appreciation to you, to your staff and to the contributors to the Portable Paper, for its publication, and to the personnel at Personalized Software for their services and the merchandise available therefrom.

I have a question about a function of the ROM FOR REFLECTION 1 REV.A.c1985 WRCI HP82863K OPT 400 1 of 1. According to the cautionary note on page B-6 of the Manual, "Using REFLECTION 1 Edition 2:, February 1986 part number HP82863-90003, "Exiting REFLECTION 1 via the exit command without first entering the port power-off escape sequence (Esc &bR) leaves your communications port on, which can be a drain on your computer's battery." According to HP Portable Plus REFLECTION 1 SUPPLEMENTAL DISC Rev. A Part No. 82863-12001 c1985 and to SUPPLEMENTAL DISC Rev. B Part No. 82863-12002 c1985, the EXAMPLES.CMD should display `^[&bR` for EXIT. (The sequence of `^[` is used for ESC in the SUPPLEMENTAL DISK.) But putting `^[&bR` into the Command Line for REFLECTION 1 returns a message of "Invalid Syntax Press RETURN to clear." The same response is given by REFLECTION 1 from my first HP-110+.

I am asking whether this conforms with your experience with other REFLECTION 1 ROMs? The copyright on the ROM chips is for 1985 and the printing history for the Edition 2 of the manuals is 1986. Do you know if the ROMs manufactured initially differed from those later

manufactured and sold with 1986 manuals? Can Personalized Software offer any suggestions about this cautionary advice? I wish to avoid all unnecessary drain on the battery. When I examine the Systems Configuration, however I find the Serial power is turned off after I use the System Exit from REFLECTION 1.

The cumulative and detailed index of the contents of all previous issues is very helpful in using the contents of the back issues. Could you also print separately a cumulative index to the advertisements in Portable Paper?

**John Castleman Hubbard, MD**  
62 Woodview Drive  
Orchard Park, NY 14127-2735

*[We will consider an ad index especially if there is other interest. If anyone has any response to Dr. Hubbard's Reflection query, please send it our way -- Hal.]*

## Good Overseas Service

Last consignment you mailed to me April 2nd, received today, Monday April 9th, 1990. Good service indeed!

**W. Warnes**  
ARAMCO, Box 1197  
Dhahran-31311  
SAUDI ARABIA

## HP110/HP110+ USER GROUPS

Thanks to so many of you who are willing to help organize local users groups. Users groups give an opportunity to share tips, answer questions, discuss other products, trade free software and Lotus templates, and meet other professionals. As you will notice, some areas have more than one contact person and some major areas have none. If you are in a "missing" area and would like to organize a group, contact us. If your groups combine, also tell us. We will publish this column each issue, keeping it up to date. Write: *Local Users Groups*, Box 869, Fairfield, IA 52556 515-472-6330. **California**, Southern California We meet 2nd Thur 7-9 at HP sales office, 5161 Lankershim Blvd, North Hollywood. Request PORTOVEC Notes Newsletter, Dave Mark, 818-794-4969. **San Diego** Steven L. Eyre 619-452-8530, Dan Butterfield, 619-470-3551. **San Mateo**, Santa Clara Counties, San Francisco Bay Area, BAYCHHU, HP Laptops & Handhelds, meet 2nd Sat of the month, Contact Jim Horn, 707-523-4890 eve, or Michael Felsenstein, 415-564-8279 eve. **Sunnyvale** Interex Int'l Hewlett Packard Users Group, 640 Almanor Ave, 408-738-4848. **Colorado**, Colorado Springs Dan Ritt, 303-528-8080. **Denver** call Bob Pressey, 303-777-0326. **Hawaii**, Honolulu Rodney Y. Fukuya if interested, 808-945-3111. **Indiana**, Indianapolis, Bob Glass, 317-638-2326. **Iowa**, Mid Iowa Ed Keefe D: 515-964-6644 E: 515-964-7064, SouthEast Iowa, Hal Goldstein, 515-472-6330. **Minnesota**, Minneapolis/St.Paul, John Ferman, 612-822-1372. **Maine**, Yarmouth, Every last Tues 6:30, US route One, Yarmouth, ME 04096, 846-5497. **North Carolina**, Charlotte and Surrounding Area, John Jacob, 704-334-3468. **Texas**, Houston, Thomas R. Page D: 713-759-4259 E: 713-528-7138. **Utah**, Utah County, Donna Hoover D: 378-4421, E: 375-4812. **Washington**, Eastern Washington, Northern Idaho, Western Montana, and possibly Western Washington, Bob Sandberg, 509-466-4999. **Eastern Washington**, Stephen S. Warner, D: 509-534-1588, E: 509-535-3322. **Western Washington**, Portable Plus, 150 and Vectra users meet first Thurs 7-9 pm, HP sales office, Bellevue, Pete Ross, 206-342-8875. **Portable**, 40 & 50 Series: 7-9pm second Wed., U.Wash. computer center, Seattle, Bob Moore, 206-543-7879. **Washington D.C.**, Greater Washington D.C. area, 8:00 pm, Third Monday of each month, Ballston Tower #1 800 N. Quincy St., Room 519. Call to confirm and say Hi. William F. Cross, D: 202-696-4112, E: 703-845-9508. **Australia**, 8 Avoca St. S. Yarra, Victoria, Australia. Nigel S. Ball. 03-267-8344. **Central America**, I would be happy to form a users group, either Spanish or English, Apartado Postal 1587, Tegucigalpa, Honduras. **England**, HP Computer Users Association LTD, Cunningham House, Bessborough Road, Harrow, HA1 3DX, United Kingdom, 01-423-3313. **Japan**, I would like to help start a users' group. Michael Lazarin, 26-26-502 Moto Ujina; Minami-ku, Hiroshima 734. **Netherlands**, Mr. R.M. Franquiner, Menthenbergseweg 13, NL-6816 PR, Arnhem, The Netherlands. **Spain**, Club de usuarios HP 110, Pont Reyes S.A., A la atencion de D. Enrique Serra, Ronda Universidad, 15, 08007, Espana. **Sweden**, Stokholm, first Thurs each month 6:30 pm, call to confirm. Jens Pettersson, 08-713-1710. Telex 149 70 gentel S.

# WordPerfect 5.0 (and) 4.2 for

***You don't need an IBM PC to run the world's best-selling word processor. Now you can use industry-standard WordPerfect on your HP150 or Portable Plus! P.S. We even have a Portable Plus version that's partly on ROM!***

WordPerfect. It's the world's best-selling word processor for the IBM PC. Most reviewers feel it's the best word processor on the market.

WordPerfect not only performs all the usual functions you would expect from a full-featured word processor, such as:

- search and replace
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- superscripts and subscripts
- automatic hyphenation
- right justification
- undeleting of deleted text
- and more,

but it also offers a carload of advanced features—such as:

- Text in Columns
- Footnotes, Tables of Contents, and Indexes
- 115,000-word Speller
- Thesaurus
- Mail-Merging
- And built-in Math functions for creating a mini spreadsheet anywhere in your document.

Best of all, **you can run the complete WordPerfect on your Portable Plus or HP150 Touchscreen.** (Depending on the kind of Portable Plus or HP150 you have, you can use either WordPerfect 4.2 or the new 5.0.)

To learn more about the world's most advanced word processor—and how to use it on your HP computer—read the information on these two pages. Better still, try our Portable Plus or HP150 version of WordPerfect for yourself *at our risk*.

Order WordPerfect today, and put it through its paces.

Use it to format documents in a fraction of the time it took you before.

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Use it for footnotes, mail merging, database sorting, or any of its other advanced features.

Use it for your daily correspondence or for generating the most complex reports you can think of, complete with numerical tabulations and text in columns.

If, within 60 days, you feel that WordPerfect isn't everything we say it is—or if you are dissatisfied with WordPerfect *for any other reason*—simply return it and we'll send you a full refund.

	Product Number	Retail Price	Subscriber Price
WordPerfect 5.0 for the Portable Plus (includes PlusPerfect)	WD17NS	\$645	\$395
PlusPerfect	WD14NS	\$150	\$129
WordPerfect 5.0 for the Portable Plus, with ROM Backup (includes WordPerfect, PlusPerfect, Backup ROMs)	WD11NK	\$940	\$595
WordPerfect ROM Backup*	WD12NR	\$295	\$295
Wordperfect 4.2 for the Portable Plus	WD14NS	\$435	\$339
WordPerfect 5.0 for the HP150	WD13NS	\$495	\$395
WordPerfect 4.2 single-sided for HP150	WD12NS	\$435	\$339
WordPerfect 4.2 double-sided for the HP150	WD11NS	\$435	\$339

WordPerfect Upgrade Kit (Upgrades Personalized Software Portable Plus or HP150 version 4.2 to 5.0) .....

..... Call us for pricing and other details.

\* Requires proof of purchase of WordPerfect 5.0 and PlusPerfect, and written confirmation that you will honor the WordPerfect license agreement.

## Here's What You Get

Here's what you receive when you order the Portable Plus or HP150 version of WordPerfect (published exclusively by us). Note: See box below to determine whether you should buy WordPerfect 4.2 or 5.0.

### 1. Complete WordPerfect software and Users Manual

The entire IBM PC version of WordPerfect (on 3½" disks) and the standard WordPerfect users manual.

### 2. Special utility programs

Our versions of WordPerfect 4.2 and 5.0 both come with an IBM PC emulator program that allows WordPerfect to run on your HP computer. (The Portable Plus version of this emulator is called PlusPerfect.) Our disks also include "batch" files that allow you to run WordPerfect automatically.

### 3. (Optional) ROM Backup for Portable Plus

6 ROM chips containing PlusPerfect and a significant portion of WordPerfect 5.0. (You can use 4 or 6 of these ROMs, depending on the amount of space available in your ROM drawer.)

Although you'll still need to store a 300K WordPerfect file on your disk and set main memory to 376K, this ROM Backup saves you up to 384K of RAM.

To purchase the ROM Backup, you must already own (or order) WordPerfect 5.0 and PlusPerfect on disk.

### 4. Instruction booklet

In addition to the comprehensive WordPerfect users manual, we supply our own instruction booklet. It tells you, step-by-step, how to get started, what to ignore in the users manual, and how to use WordPerfect on your HP computer.

### 5. Keyboard template

We also include a convenient 4-color keyboard template that we've designed specifically for the unique keyboard layout of your Portable Plus or HP150. The template shows you, at a glance, which keys to press to execute each of WordPerfect's functions.

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See order form for details.

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**Personalized Software**  
P.O. Box 869, Fairfield, IA 52556 515/472-6330



# the Portable Plus and HP150

## Frequently Asked Questions

(If you have additional questions, don't hesitate to call us!)

### Q. Are the Portable Plus and HP150 versions of WordPerfect identical to the IBM PC version?

A. WordPerfect 5.0 and 4.2 are identical on all three machines, except:

- a.) the on-line tutorial does not run on the Portable Plus or HP150. (However, the "learning" section of the users manual covers the same material as the tutorial.)
- b.) the "Preview Document" feature (which shows special fonts and graphics as they will appear on printing) functions in a limited way.
- c.) Some extra, unessential utilities that come with WordPerfect do not run on the HP150 or Portable Plus.

With both 5.0 and 4.2, if you already know how to use WordPerfect on an IBM PC, you can use the HP version right out of the box.

### Q. Can I transfer WordPerfect files back and forth between different versions of WordPerfect and between my HP computer and an IBM PC?

A. Yes to both.

WordPerfect 5.0 has a built-in transfer utility that makes sharing files between versions of 4.2 and 5.0 easy.

Moreover, WordPerfect produces identical files on an IBM PC, Portable Plus, and HP150. The only difficulty that may arise in transferring files between these machines is that HP and IBM computers use different formats. If you don't already have the ability to accomplish the transfer, you can either use our Disk Conversion Service or a variety of hardware or software solutions, depending on your system. For details, see "File Transfer Made Easy," in our product listings in this issue.

## WordPerfect 4.2 or 5.0—Which Should You Buy?

To determine which version of WordPerfect to buy—4.2 or the new 5.0—follow these steps:

### Step 1. Assess your needs.

Please see the column, "WordPerfect's Newest Version" (at top right) to learn about the features that are unique to Version 5.0. If you need these features, then 5.0 is the version for you, provided your machine can run it (see below).

### Step 2. Check your memory size.

#### Portable Plus:

To comfortably run Version 5.0, you'll need a

### Q. Where can I get assistance in using WordPerfect on my HP150 or Portable Plus?

A. If you have a problem related to the HP150 or Portable Plus—or if you're not sure where the problem lies—call us. If you have a question about how to use a WordPerfect feature, call WordPerfect Corporation. They are famous for the calibre of their customer support, and you can call them toll-free.

### Q. Will the HP version of WordPerfect work with my printer?

A. Our instruction booklet tells you how to run WordPerfect with all printers that work with your Portable Plus or HP150, including serial, parallel (Centronix), HP-IB, and HP-IL.

## WordPerfect in Brief

Here are some of the advanced features that have made WordPerfect the world's number-one selling word processor. (These features are common to WordPerfect 4.2 and 5.0).

### Speller

WordPerfect's built-in spell-checker is fast, thorough, and easy to use. The main dictionary contains 115,000 words, and you can add words of your own to one or more auxiliary dictionaries. The Speller also counts the number of words in a document or in any block of text.

### File merging and mail merging

With WordPerfect, it's easy to produce personalized form letters (mail merging), and to assemble reports, proposals, and contracts from pre-written components.

### Thesaurus

WordPerfect's Thesaurus helps you find the right word when you need it. Synonyms are grouped by noun, verb, and adjective, and at the touch of a key, you can look at second and third levels of alternatives.

machine with at least 896K of RAM (e.g., a 512K Portable Plus with a 384K RAM drawer, or a 128K Portable Plus with two 384K RAM drawers).

With an 896K machine and our ROM version, you can run WordPerfect without an HP9114 disk drive. Otherwise, with an 896K Portable Plus, you need to load WordPerfect from the HP9114. Once you load WordPerfect, you no longer need the HP9114 to run WordPerfect.

To comfortably run Version 4.2, you'll need a machine with 640K of RAM.

You can run either version of WordPerfect with just 512K of RAM if you're willing to do a lot of disk access from your HP9114.

### Columns

WordPerfect's Columns feature is ideal for writing a newsletter, glossary, script, or any text that requires columnar format. Up to 24 columns can be formatted in either newspaper style (snaking) or parallel style (side-by-side). The columns appear on the screen exactly as they will print on the page.

### Footnotes and endnotes

WordPerfect streamlines the task of creating and editing footnotes and endnotes. Just enter information at the appropriate spot, and WordPerfect takes care of numbering and formatting—including allowing just the right amount of space at the bottom of the page. If you later add or delete a note, WordPerfect will automatically renumber the others.

### Table of contents

Mark portions of your text, specify a format, and WordPerfect will automatically generate a Table of Contents and an Index for your document.

### Math

WordPerfect lets you use 4-function math for calculations across columns and for subtotals, totals, and grand totals down columns, anywhere in your document. Whenever you change a number, WordPerfect updates the totals. It's like having a mini spreadsheet at your fingertips—without leaving WordPerfect.

### Sort

You can sort lines, paragraphs—even external database records—from within WordPerfect. You can apply logical rules to the sort: It's easy, for example, to generate an alphabetized list of all customers in California who have purchased more than \$100 worth of merchandise within the last 6 months.

Note: You might consider purchasing a 1 Megabyte RAM drawer for your Portable Plus. This would let you bring the superb WordPerfect speller module wherever you go without having to load it in from an external disk drive. And with a megabyte of extra RAM, you'd have lots of room left over for text files.

### HP150:

To run Version 5.0, you'll need 512K of memory and a double-sided disk drive.

To run Version 4.2, you'll need 256K of internal memory and either a double-sided or single-sided disk drive. (Note: If your HP150 uses single-sided disks, you'll also need a hard disk drive to run Version 4.2. Neither version of WordPerfect will run on a dual-floppy single-

## WordPerfect's Newest Version

Here are the main features that have been added to WordPerfect in upgrading it from Version 4.2 to 5.0:

### Fonts and printing

WordPerfect 5.0 lets you set margins, tabs, etc. using inches, centimeters, and points. Fonts may be freely mixed and changed without affecting margins, tabs, or column definitions.

### Integrated text and graphics

WordPerfect 5.0 lets you insert graphic images from most graphics programs directly into your text. You can enlarge, reduce, move, and rotate most images to your specifications.

### Styles

You can combine text and codes to create a specific "style," or format, that you can then use over and over again (for chapter headings, subheadings, etc.).

### Document compare

WordPerfect 5.0 will compare the on-screen document to an existing document on disk. Text that has been added will be "red-lined" (marked with a vertical bar in the left margin), and text that has been deleted will be shown in "strike-out."

### Keyboard redefinition and macros

WordPerfect 5.0 lets you store any sequence of keystrokes so that those keystrokes will be executed upon the press of a single key. This "macro" feature allows easy entry of repeated text and commands. One way to use macros is to change the key assignments for WordPerfect's features. There is no limit to the number of different keyboard layouts you can thus define.

sided HP150 system.)

### Our recommendations:

In general: Choose WordPerfect 4.2 if: (a) your machine demands it, or (b) you're already using 4.2 on other machines and don't intend to upgrade, or (c) you wish to save some money and don't need the new features in WordPerfect 5.0.

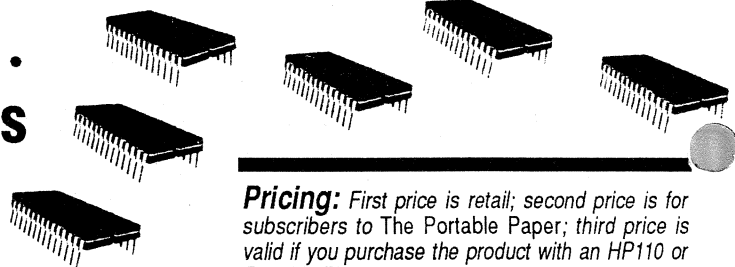
On the other hand, if you want those new features and your machine can handle it, WordPerfect 5.0 is the one you should get. If you use a Portable Plus, you'll tie up the least amount of RAM if you purchase our ROM Backup version of WordPerfect 5.0.

**NEW!**

# Portable Plus users: .....

## Now you can easily put programs and data on ROM yourself!

### — up to 1.5 megabytes per ROM drawer!



No more lugging a disk drive wherever you go! No more taking up precious Edisk space with frequently used programs and data! Now you can easily put almost any program - and important data - on ROM chips and store them in your Portable Plus's ROM drawer.

Once you've done so, your programs and data are available instantly, with no danger of loss and no need for an external disk drive.

"Burning" your own ROMs is easy - even for a computer novice - with our Portable Plus ROM Burner. All you do is connect the ROM Burner to your Plus, and follow the simple instructions we provide for using the software that comes with the unit. (We even show you how to have your ROM programs automatically show up on your PAM menu!)

#### ERASABLE!

If you make a mistake while burning in a ROM - or if you later wish to change the contents of your ROMs - no problem. Just use the ultraviolet eraser that comes with our ROM Burner and start over. (Our programmable ROMs are technically "EPROMs", which stands for "erasable programmable read-only memory.")

#### UP TO 3 MEGABYTES ON ROM!

The ROM drawer that fits into the bottom of your Portable Plus has sockets for 12 ROMs. Each socket can hold a 128 Kbyte ROM. Even though there are more than 50 programs now available on ROM for the Portable Plus, most people only use 2-6 of the 12 sockets - which means part of the 1.5 megabytes of each drawer's available ROM capacity is going to waste.

Our Portable Plus ROM Burner lets you fill that unused ROM space with fixed data and with almost any Portable Plus program you wish - including programs that are not commercially available on ROM. This eliminates the need for an external drive and frees up valuable space on your electronic disk.

The availability of our Portable Plus ROM Burner opens up other possibilities as well.

For example, depending on your needs, you might want to install two ROM drawers instead of just one. This gives you 3 megabytes in which to store programs and fixed data, with 512K still available inside your Plus to divide between internal memory and Edisk.

You could even utilize a whole series of ROM drawers for different occasions, easily switching them back and forth whenever you need to. (After backing up your Edisk, it takes only a minute or two to change a ROM drawer - you just remove and replace two screws.)

Regardless of your needs, we invite you to take advantage of this Portable Plus breakthrough. Put your programs and fixed data on ROM and experience the ultimate in portable computing convenience. Order our ROM Burner for the Portable Plus today.

**ONE YEAR GUARANTEE • 60-DAY TRIAL**  
See order form for details

#### HERE'S WHAT YOU GET

A must for every Portable Plus user, our ROM Burner package includes:

1. **Personalized Software ROM Burner for Portable Plus, with serial cable.** Burns commercially available 64 Kbyte ROMs or special Personalized Software 128 Kbyte ROMs.
2. **Ultraviolet eraser.** Erases 64K or 128K ROMs for return. Lets you correct mistakes or change programs or data. Also useful for testing to make sure your newly burned ROMs work properly.
3. **All necessary software,** including: two compression programs that shrink COM and EXE files so you can fit more programs on your ROM chips, and software that allows you to use our Portable Plus ROM Burner with an IBM PC or compatible.
4. **Two Personalized Software 128 Kbyte EPROMs** (erasable programmable ROMs).
5. **Complete user manual.** Clear, step-by-step tutorial, written for novice and experienced users alike. How to burn ROMs, how to use accompanying software, how to get ROM programs to show up on your PAM screen. Also includes suggestions on what to put into ROM, how to avoid snags, and other tips based on our years of experience in supporting the Portable Plus.

#### IMPORTANT

We expect to be shipping ROM Burners by June 30, 1990. We will ship on a first-ordered, first-served basis.

**Please order early.** We expect this to be a very popular item, and we need to gain an idea of the demand so we can maintain proper inventory. Order now to make sure you'll receive your ROM Burner as soon as we begin shipping.

**Pricing:** First price is retail; second price is for subscribers to The Portable Paper; third price is valid if you purchase the product with an HP110 or Portable Plus.

- **EP10NH Personalized Software ROM Burner Package for the Portable Plus** (ROM Burner, serial cable, ultraviolet eraser, software, two 128 Kbyte EPROMs, user manual) \$695 \$595 (\$495)
- **Personalized Software 128 Kbyte erasable programmable ROMs (EPROMs) for the Portable Plus**  
EP11NR Single EPROM \$69 \$59 (\$49)  
EP12NX Set of 4 \$276 \$199 (\$179)
- **Personalized Software 128 Kbyte non-erasable programmable ROMs (PROMs) for the Portable Plus** (Ideal for making multiple copies of ROMs)  
EP18NR Single PROM \$64 \$54 (\$45)  
EP19NX Set of 4 \$256 \$179 (\$159)
- **EP13NR 27C512, 12.5V, 64 Kbyte EPROM**  
\$25 \$22 (\$19)
- **EP14NS ROM Burner software and manual only** (Useful if you wish to burn your own 64 Kbyte EPROMs for the Portable Plus using a different ROM burner)  
\$250 \$195 (\$195)
- **SW11UC Portable Plus ROM drawer**  
\$195 \$99 (\$79)
- **EP15NE Custom ROM services**  
Custom EPROMs (includes 10 minutes testing to make sure your ROM works in Portable Plus as specified)  
\$150 \$135 (\$135)
- **EP16NE ROM consulting** (additional testing, batch file rewriting, etc.): \$75/hour
- **EP17NG Special for Personalized Software customers:** Send us any two 64 Kbyte software ROMs purchased from us and we'll combine them into a single 128 Kbyte ROM. \$69 \$59 (\$59)



#### BREAKTHROUGH IN PORTABLE PLUS ROM TECHNOLOGY

Our Portable Plus ROM Burner is a breakthrough for Portable Plus owners. It copies programs and data onto special 128 Kbyte programmable ROMs created exclusively for us.

Aside from ours, the largest commercially available programmable ROMs that fit the sockets inside the Portable Plus ROM drawer are only 64 Kbytes. Our 128 Kbyte programmable ROMs give you double the storage capacity!

Moreover, unlike the procedures you have to go through with other ROM Burners, ours are easy. We supply all the software you need and a user manual that even a novice can follow with ease. Most importantly, ours is the only ROM Burner that lets you burn these ROMs directly from your Portable Plus.

**We also offer custom burning of non-erasable ROMs. With volume discount, this can cost significantly less than the price of blank EPROMs.**

**Call for a quotation.**

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